

SEQUENCE LISTING

<110> MCCARTHY, Sean A  
FRASER, Christopher C  
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BARNES, Thomas S  
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MACKAY, Charles R  
MYERS, Paul S  
LEIBY, Kevin R  
WRIGHTON, Nicholas  
GOODEARL, Andrew  
HOLTZMAN, Douglas A

<120> NOVEL GENES ENCODING PROTEINS HAVING PROGNOSTIC,  
DIAGNOSTIC, PREVENTIVE, THERAPEUTIC, AND OTHER USES

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<170> PatentIn Ver. 2.1

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Ile	Ile	Asp	Pro	Arg	Ser	Cys	Asp	Ile	His	Thr	Asn	Val	Ser	Met	Asp	515	520	525	
Ser	Val	Pro	Tyr	Thr	Glu	Trp	Glu	Leu	Ser	Val	Ile	Ile	Gln	Asp	Lys	530	535	540	
Gly	Asn	Pro	Gln	Leu	His	Thr	Lys	Val	Leu	Leu	Lys	Cys	Met	Ile	Phe	545	550	555	560
Glu	Tyr	Ala	Glu	Ser	Val	Thr	Ser	Thr	Ala	Met	Thr	Ser	Val	Ser	Gln	565	570	575	
Ile	Cys	Ala	Val	Leu	Leu	Val	Ile	Met	Val	Leu	Phe	Ala	Thr	Arg	Cys	580	585	590	
Asn	Arg	Glu	Lys	Lys	Asp	Thr	Arg	Ser	Tyr	Asn	Cys	Arg	Val	Ala	Glu	595	600	605	
Ser	Thr	Tyr	Gln	His	His	Pro	Lys	Arg	Pro	Ser	Arg	Gln	Ile	His	Lys	610	615	620	

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Gln	Met	Gly	Ser	Arg	Gln	Ser	His	Asn	Ser	His	Gln	Ser	Leu	Asn	Ser	660	665	670	
Glu	Leu	Thr	His	Ala	Thr	Pro	Ala	Val	Glu	Gln	Val	Ser	Gln	Leu	Leu	675	680	685	
Ser	Met	Leu	His	Gln	Gly	Gln	Tyr	Gln	Pro	Arg	Pro	Ser	Phe	Arg	Gly	690	695	700	
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Phe	Ser	Leu	Lys	Asp	Ser	Gly	Arg	Gly	Asp	Ser	Glu	Ala	Gly	Asp	Ser	725	730	735	
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Cys	Trp	Met	Pro	Pro	Leu	Pro	Ser	Pro	Ser	Ser	Asp	Tyr	Arg	Ser	Asn	770	775	780	
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Pro	His	Gln	Ser	Leu	Glu	Asp	Asp	Ala	Gln	Pro	Ala	Asp	Ser	Gly	Glu	805	810	815	
Lys	Lys	Lys	Ser	Phe	Ser	Thr	Phe	Gly	Lys	Asp	Ser	Pro	Asn	Asp	Glu	820	825	830	
Ser	Ser	Val	Phe	Gln	Arg	Leu	Leu	Pro	Pro	Ser	Leu	Asp	Thr	Tyr	Ser	835	840	845	
Gly	Pro	Pro	Leu	Gly	Thr	His	Ser	Ser	Val	Gln	Pro	Ser	Ser	Lys	Trp	850	855	860	
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[illegible]

<213> Homo sapiens

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Val Thr Ser Thr Ala Met Thr Ser Val Ser Gln Ala Ser Leu Asp Val  
595 600 605

Leu Val Ile Met Val Leu Phe Ala Thr Arg Cys Asn Arg Glu Lys Lys  
610 615 620

Asp Thr Arg Ser Tyr Asn Cys Arg Val Ala Glu Ser Thr Tyr Gln His  
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His Pro Lys Arg Pro Ser Arg Gln Ile His Lys Gly Asp Ile Thr Leu  
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Val Pro Thr Ile Asn Gly Thr Leu Pro Ile Arg Ser His His Arg Ser  
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Ser Pro Ser Ser Ser Pro Thr Leu Glu Arg Gly Gln Met Gly Ser Arg  
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Ser Ser Asn His Val Pro Glu Asn Phe Ser Leu Glu Leu Thr His Ala  
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Thr Pro Ala Val Glu Val Ser Gln Leu Leu Ser Met Leu His Gln Gly  
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Tyr Arg Tyr Ala Leu Gln Asp Met Asp Lys Phe Ser Leu Lys Asp Ser  
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Glu Phe Asp Val Ile Thr Leu Pro Thr Glu His Leu Gln Leu Phe His  
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Ile Glu Val Glu Val Leu Asp Ile Asn Asp Asn Ser Pro Gln Phe Ser  
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<211> 1183

<212> PRT

<213> Mus sp.

<400> 42

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Lys Phe Gln Val Thr Glu Glu Val Pro Ser Gly Thr Val Ile Gly Lys  
 35 40 45

Asp Ala Phe Gln Ile Leu Gln Leu Pro Gln Ala Leu Pro Val Gln Met  
 50 55 60

Asn Ser Glu Asp Gly Leu Leu Ser Thr Ser Ser Arg Leu Asp Arg Glu  
 65 70 75 80

Lys Leu Cys Arg Gln Glu Asp Pro Cys Leu Val Ser Phe Asp Val Leu  
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Ala Thr Gly Ala Ser Ala Leu Ile His Val Glu Ile Gln Val Leu Asp  
 100 105 110

Ile Asn Asp His Gln Pro Gln Phe Pro Lys Asp Glu Gln Glu Leu Glu  
 115 120 125

Ile Ser Glu Ser Ala Ser Leu His Thr Arg Ile Pro Leu Asp Arg Ala  
 130 135 140

Leu Asp Gln Asp Thr Gly Pro Asn Ser Leu Tyr Ser Tyr Ser Leu Ser  
 145 150 155 160

Pro Ser Glu His Phe Ala Leu Asp Val Ile Val Gly Pro Asp Glu Thr  
 165 170 175

Lys His Ala Glu Leu Val Val Val Lys Glu Leu Asp Arg Glu Leu His  
 180 185 190

Ser Tyr Phe Asp Leu Val Leu Thr Ala Tyr Asp Asn Gly Asn Pro Pro  
 195 200 205

Lys Ser Gly Ile Ser Val Val Lys Val Asn Val Leu Asp Ser Asn Asp  
 210 215 220

Asn Ser Pro Val Phe Ala Glu Ser Ser Leu Ala Leu Glu Ile Pro Glu  
 225 230 235 240

Asp Thr Val Pro Gly Thr Leu Leu Ile Asn Leu Thr Ala Thr Asp Pro  
 245 250 255

Asp Gln Gly Pro Asn Gly Glu Val Glu Phe Phe Phe Gly Lys His Val  
 260 265 270

Ser Pro Glu Val Met Asn Thr Phe Gly Ile Asp Ala Lys Thr Gly Gln  
 275 280 285

Ile Ile Leu Arg Gln Ala Leu Asp Tyr Glu Lys Asn Pro Ala Tyr Glu  
 290 295 300

Val Asp Val Gln Ala Arg Asp Leu Gly Pro Asn Ser Ile Pro Gly His  
 305 310 315 320

Cys Lys Val Leu Ile Lys Val Leu Asp Val Asn Asp Asn Ala Pro Ser  
 325 330 335

Ile Leu Ile Thr Trp Ala Ser Gln Thr Ser Leu Val Ser Glu Asp Leu  
 340 345 350

Pro Arg Asp Ser Phe Ile Ala Leu Val Ser Ala Asn Asp Leu Asp Ser  
 355 360 365

Gly Asn Asn Gly Leu Val His Cys Trp Leu Asn Gln Glu Leu Gly His  
 370 375 380

Phe Arg Leu Lys Arg Thr Asn Gly Asn Thr Tyr Met Leu Leu Thr Asn  
 385 390 395 400

Ala Thr Leu Asp Arg Glu Gln Trp Pro Ile Tyr Thr Leu Thr Val Phe  
 405 410 415

Ala Gln Asp Gln Gly Pro Gln Pro Leu Ser Ala Glu Lys Glu Leu Gln  
 420 425 430

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700  
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400  
300  
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100  
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Ile Gln Val Ser Asp Val Asn Asp Asn Ala Pro Val Phe Glu Lys Ser  
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Arg Tyr Glu Val Ser Thr Trp Glu Asn Asn Pro Pro Ser Leu His Leu  
450 455 460

Ile Thr Leu Lys Ala His Asp Ala Asp Leu Gly Ser Asn Gly Lys Val  
465 470 475 480

Ser Tyr Arg Ile Lys Asp Ser Pro Val Ser His Leu Val Ile Ile Asp  
485 490 495

Phe Glu Thr Gly Glu Val Thr Ala Gln Arg Ser Leu Asp Tyr Glu Gln  
500 505 510

Met Ala Gly Phe Glu Phe Gln Val Ile Ala Glu Asp Arg Gly Gln Pro  
515 520 525

Gln Leu Ala Ser Ser Ile Ser Val Trp Val Ser Leu Leu Asp Ala Asn  
530 535 540

Asp Asn Ala Pro Glu Val Ile Gln Pro Val Leu Ser Glu Gly Lys Ala  
545 550 555 560

Thr Leu Ser Val Leu Val Asn Ala Ser Thr Gly His Leu Leu Leu Pro  
565 570 575

Ile Glu Asn Pro Ser Gly Met Asp Pro Ala Gly Thr Gly Ile Pro Pro  
580 585 590

Lys Ala Thr His Ser Pro Trp Ser Phe Leu Leu Leu Thr Ile Val Ala  
595 600 605

Arg Asp Ala Asp Ser Gly Ala Asn Gly Glu Leu Phe Tyr Ser Ile Gln  
610 615 620

Ser Gly Asn Asp Ala His Leu Phe Phe Leu Ser Pro Ser Leu Gly Gln  
625 630 635 640

Leu Phe Ile Asn Val Thr Asn Ala Ser Ser Leu Ile Gly Ser Gln Trp  
645 650 655

Asp Leu Gly Ile Val Val Glu Asp Gln Gly Ser Pro Ser Leu Gln Thr  
660 665 670

Gln Val Ser Leu Lys Val Val Phe Val Thr Ser Val Asp His Leu Arg  
675 680 685



Asp Ser Ala His Glu Pro Gly Val Leu Ser Thr Pro Ala Leu Ala Leu  
690 695 700

Ile Cys Leu Ala Val Leu Leu Ala Ile Phe Gly Leu Leu Leu Ala Leu  
705 710 715 720

Phe Val Ser Ile Cys Arg Thr Glu Arg Lys Asp Asn Arg Ala Tyr Asn  
725 730 735

Cys Arg Glu Ala Glu Ser Ser Tyr Arg His Gln Pro Lys Arg Pro Gln  
740 745 750

Lys His Ile Gln Lys Ala Asp Ile His Leu Val Pro Val Leu Arg Ala  
755 760 765

His Glu Asn Glu Thr Asp Glu Val Arg Pro Ser His Lys Asp Thr Ser  
770 775 780

Lys Glu Thr Leu Met Glu Ala Gly Trp Asp Ser Cys Leu Glu Ala Pro  
785 790 795 800

Phe His Leu Thr Pro Thr Leu Tyr Arg Thr Leu Arg Asn Gln Gly Asn  
805 810 815

Gln Gly Glu Leu Ala Glu Ser Gln Glu Val Leu Gln Asp Thr Phe Asn  
820 825 830

Phe Leu Phe Asn His Pro Arg Gln Arg Asn Ala Ser Arg Glu Asn Leu  
835 840 845

Asn Leu Pro Glu Ser Pro Pro Ala Val Arg Gln Pro Leu Leu Arg Pro  
850 855 860

Leu Lys Val Pro Gly Ser Pro Ile Ala Arg Ala Thr Gly Asp Gln Asp  
865 870 875 880

Lys Glu Glu Ala Pro Gln Ser Pro Pro Ala Ser Ser Ala Thr Leu Arg  
885 890 895

Arg Gln Arg Asn Phe Asn Gly Lys Val Ser Pro Arg Gly Glu Ser Gly  
900 905 910

Pro His Gln Ile Leu Arg Ser Leu Val Arg Leu Ser Val Ala Ala Phe  
915 920 925

Ala Glu Arg Asn Pro Val Glu Glu Pro Ala Gly Asp Ser Pro Pro Val  
930 935 940

Gln Gln Ile Ser Gln Leu Leu Ser Leu Leu His Gln Gly Gln Phe Gln  
945 950 955 960

Pro Lys Pro Asn His Arg Gly Asn Lys Tyr Leu Ala Lys Pro Gly Gly  
965 970 975

Ser Ser Arg Gly Thr Ile Pro Asp Thr Glu Gly Leu Val Gly Leu Lys  
980 985 990

Pro Ser Gly Gln Ala Glu Pro Asp Leu Glu Glu Gly Pro Pro Ser Pro  
995 1000 1005

Leu Ser Ser Leu Leu Asp Pro Asn Thr Gly Leu Ala Leu Asp Lys Leu  
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Ser Pro Pro Asp Pro Ala Trp Met Ala Arg Leu Ser Leu Pro Leu Thr  
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Ser Glu Glu Pro Arg Thr Phe Gln Thr Phe Gly Lys Thr Val Gly Pro  
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Gly Pro Glu Leu Ser Pro Thr Gly Thr Arg Leu Ala Ser Thr Phe Val  
1060 1065 1070

Ser Glu Met Ser Ser Leu Leu Glu Met Leu Leu Gly Gln His Thr Val  
1075 1080 1085

Pro Val Glu Ala Ala Ser Ala Ala Leu Arg Arg Leu Ser Val Cys Gly  
1090 1095 1100

Arg Thr Leu Ser Leu Asp Leu Ala Thr Ser Gly Ala Ser Ala Ser Glu  
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Ala Gln Gly Arg Lys Lys Ala Ala Glu Ser Arg Leu Gly Cys Gly  
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 <211> 365  
 <212> PRT  
 <213> Homo sapiens

<400> 53  
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Gly Gly Thr Gln Ile Thr Pro Leu Asn Asp Asn Val Thr Ile Phe Cys  
 35 40 45

Asn Ile Phe Tyr Ser Gln Pro Leu Asn Ile Thr Ser Met Gly Ile Thr  
 50 55 60

Trp Phe Trp Lys Ser Leu Thr Phe Asp Lys Glu Val Lys Val Phe Glu  
 65 70 75 80

Phe Phe Gly Asp His Gln Glu Ala Phe Arg Pro Gly Ala Ile Val Ser  
 85 90 95

Pro Trp Arg Leu Lys Ser Gly Asp Ala Ser Leu Arg Leu Pro Gly Ile  
 100 105 110

Gln Leu Glu Glu Ala Gly Glu Tyr Arg Cys Glu Val Val Val Thr Pro  
 115 120 125

Leu Lys Ala Gln Gly Thr Val Gln Leu Glu Val Val Ala Ser Pro Ala  
 130 135 140

Ser Arg Leu Leu Leu Asp Gln Val Gly Met Lys Glu Asn Glu Asp Lys  
 145 150 155 160

Tyr Met Cys Glu Ser Ser Gly Phe Tyr Pro Glu Ala Ile Asn Ile Thr  
 165 170 175

Trp Glu Lys Gln Thr Gln Lys Phe Pro His Pro Ile Glu Ile Ser Glu  
 180 185 190

Asp Val Ile Thr Gly Pro Thr Ile Lys Asn Met Asp Gly Thr Phe Asn  
 195 200 205

Val Thr Ser Cys Leu Lys Leu Asn Ser Ser Gln Glu Asp Pro Gly Thr  
 210 215 220

Val Tyr Gln Cys Val Val Arg His Ala Ser Leu His Thr Pro Leu Arg  
 225 230 235 240

Ser Asn Phe Thr Leu Thr Ala Ala Arg His Ser Leu Ser Glu Thr Glu  
 245 250 255

Lys Thr Asp Asn Phe Ser Ile His Trp Trp Pro Ile Ser Phe Ile Gly  
 260 265 270

Val Gly Leu Val Leu Leu Ile Val Leu Ile Pro Trp Lys Lys Val Arg  
 275 280 285

Gly Ser Lys Ala Lys Phe Ser Pro Val Ser Trp Ala Ser Lys Lys Leu  
 290 295 300

Leu Glu Gln Leu Leu Pro Thr Leu Gln Ala Ser Arg Asp Arg Pro Ala  
 305 310 315 320

Gly Lys Asp Phe Val Ser Pro Ser Ser Pro Ser Gly Val Gly Asn Val  
 325 330 335

Gly Cys Val Pro Ile Gln Phe Pro Ile Thr Glu Asp Leu Ala Val Thr  
 340 345 350

Tyr His Leu Thr Ser Val Trp Trp Phe Val Thr Leu Gly  
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 <211> 341  
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 <213> Homo sapiens

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Asn Ile Thr Ser Met Gly Ile Thr Trp Phe Trp Lys Ser Leu Thr Phe



290

295

300

Ser Pro Ser Gly Val Gly Asn Val Gly Cys Val Pro Ile Gln Phe Pro  
 305 310 315 320

Ile Thr Glu Asp Leu Ala Val Thr Tyr His Leu Thr Ser Val Trp Trp  
 325 330 335

Phe Val Thr Leu Gly  
 340

&lt;210&gt; 55

&lt;211&gt; 24

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 55

Met Thr Trp Arg Ala Ala Ala Ser Thr Cys Ala Ala Leu Leu Ile Leu  
 1 5 10 15

Leu Trp Ala Leu Thr Thr Glu Gly  
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&lt;210&gt; 56

&lt;211&gt; 239

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 56

Leu Lys Val Glu Met Met Ala Gly Gly Thr Gln Ile Thr Pro Leu Asn  
 1 5 10 15

Asp Asn Val Thr Ile Phe Cys Asn Ile Phe Tyr Ser Gln Pro Leu Asn  
 20 25 30

Ile Thr Ser Met Gly Ile Thr Trp Phe Trp Lys Ser Leu Thr Phe Asp  
 35 40 45

Lys Glu Val Lys Val Phe Glu Phe Phe Gly Asp His Gln Glu Ala Phe  
 50 55 60

Arg Pro Gly Ala Ile Val Ser Pro Trp Arg Leu Lys Ser Gly Asp Ala  
 65 70 75 80

Ser Leu Arg Leu Pro Gly Ile Gln Leu Glu Glu Ala Gly Glu Tyr Arg  
 85 90 95



Cys Glu Val Val Val Thr Pro Leu Lys Ala Gln Gly Thr Val Gln Leu  
 100 105 110

Glu Val Val Ala Ser Pro Ala Ser Arg Leu Leu Leu Asp Gln Val Gly  
 115 120 125

Met Lys Glu Asn Glu Asp Lys Tyr Met Cys Glu Ser Ser Gly Phe Tyr  
 130 135 140

Pro Glu Ala Ile Asn Ile Thr Trp Glu Lys Gln Thr Gln Lys Phe Pro  
 145 150 155 160

His Pro Ile Glu Ile Ser Glu Asp Val Ile Thr Gly Pro Thr Ile Lys  
 165 170 175

Asn Met Asp Gly Thr Phe Asn Val Thr Ser Cys Leu Lys Leu Asn Ser  
 180 185 190

Ser Gln Glu Asp Pro Gly Thr Val Tyr Gln Cys Val Val Arg His Ala  
 195 200 205

Ser Leu His Thr Pro Leu Arg Ser Asn Phe Thr Leu Thr Ala Ala Arg  
 210 215 220

His Ser Leu Ser Glu Thr Glu Lys Thr Asp Asn Phe Ser Ile His  
 225 230 235

<210> 57  
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 <212> PRT  
 <213> Homo sapiens

<400> 57  
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Asn Ile Thr Ser Met Gly Ile Thr Trp Phe Trp Lys Ser Leu Thr Phe  
 20 25 30

Asp Lys Glu Val Lys Val Phe Glu Phe Phe Gly Asp His Gln Glu Ala  
 35 40 45

Phe Arg Pro Gly Ala Ile Val Ser Pro Trp Arg Leu Lys Ser Gly Asp  
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70

75

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Arg Cys Glu Val

&lt;210&gt; 58

&lt;211&gt; 68

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 58

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Ile Thr Gly Pro Thr Ile Lys Asn Met Asp Gly Thr Phe Asn Val Thr  
 35 40 45

Ser Cys Leu Lys Leu Asn Ser Ser Gln Glu Asp Pro Gly Thr Val Tyr  
 50 55 60

Gln Cys Val Val  
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&lt;210&gt; 59

&lt;211&gt; 18

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 59

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Leu Ile

&lt;210&gt; 60

&lt;211&gt; 83

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 60

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35	40	45	
Ser Gly Val Gly Asn Val Gly Cys Val Pro Ile Gln Phe Pro Ile Thr			
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<213> Homo sapiens

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Asp Ser Gly Thr Met Thr Ser Lys Asn Tyr Pro Gly Thr Tyr Pro Asn
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His Thr Val Cys Glu Lys Thr Ile Thr Val Pro Lys Gly Lys Arg Leu
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Ile Leu Arg Leu Gly Asp Leu Asp Ile Glu Ser Gln Thr Cys Ala Ser
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Asp Tyr Leu Leu Phe Thr Ser Ser Ser Asp Gln Tyr Gly Pro Tyr Cys
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Gly Ser Met Thr Val Pro Lys Glu Leu Leu Leu Asn Thr Ser Glu Val
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Thr Val Arg Phe Glu Ser Gly Ser His Ile Ser Gly Arg Gly Phe Leu
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 Arg Lys Lys Lys Lys Lys Gly Ser Pro Tyr Gly Ser Ala Glu Ala Gln  
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Ser His Tyr Leu Lys Thr Glu Tyr Ser Lys Phe Cys Pro Ala Gly Cys						
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Arg Asp Val Ala Gly Asp Ile Ser Gly Asn Met Val Asp Gly Tyr Arg						
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Asp Thr Ser Leu Leu Cys Lys Ala Ala Ile His Ala Gly Ile Ile Ala						
	165		170		175	
Asp Glu Leu Gly Gly Gln Ile Ser Val Leu Gln Arg Lys Gly Ile Ser						
	180		185		190	
Arg Tyr Glu Gly Ile Leu Ala Asn Gly Val Leu Ser Arg Asp Gly Ser						
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Leu Ser Asp Lys Arg Phe Leu Phe Thr Ser Asn Gly Cys Ser Arg Ser						
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Leu Ser Phe Glu Pro Asp Gly Gln Ile Arg Ala Ser Ser Ser Trp Gln						
	225		230		235	
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	245		250		255	
Arg Leu Gln Asp Gln Gly Pro Ser Trp Ala Ser Gly Asp Ser Ser Asn						
	260		265		270	
Asn His Lys Pro Arg Glu Trp Leu Glu Ile Asp Leu Gly Glu Lys Lys						
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Trp Lys Thr Tyr Lys Gly Ile Val Asn Asn Glu Glu Lys Val Phe Gln						

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Asp Ser Leu Val Trp Arg Lys Thr Ser Gln Ser Thr Ser Val Ser Thr		
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Lys Lys Glu Asp Glu Thr Ile Thr Arg Pro Ile Pro Ser Glu Glu Thr		
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Ser Thr Gly Ile Asn Ile Thr Thr Val Ala Ile Pro Leu Val Leu Leu		
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Asp Leu Ile Thr Ser Asp Met Ala Asp Tyr Gln Gln Pro Leu Met Ile		
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Asp Cys Pro Gln Arg Ala Gly Arg His Glu Tyr Ala Leu Pro Leu Ala		
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Arg Ala His Thr Phe Ser Ala Gln Ser Gly Tyr Arg Val Pro Gly Pro		



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<212> PRT

<213> Homo sapiens

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<210> 78

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<212> PRT

<213> Homo sapiens

<400> 78

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Lys Leu Asp Leu Ile Thr Ser Asp Met Ala Asp Tyr Gln Gln Pro Leu  
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Met Ile Gly Thr Gly Thr Val Thr Arg Lys Gly Ser Thr Phe Arg Pro  
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Met Asp Thr Asp Ala Glu Glu Ala Gly Val Ser Thr Asp Ala Gly Gly





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<213> Homo sapiens
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<212> PRT

<213> Homo sapiens

<400> 85

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35 40 45

Trp Glu Phe Tyr Gln Ala Arg Cys Phe Phe Leu Ser Thr Ser Glu Ser  
50 55 60

Ser Trp Asn Glu Ser Arg Asp Phe Cys Lys Gly Lys Gly Ser Thr Leu  
65 70 75 80

Ala Ile Val Asn Thr Pro Glu Lys Leu Lys Phe Leu Gln Asp Ile Thr  
85 90 95

Asp Ala Glu Lys Tyr Phe Ile Gly Leu Ile Tyr His Arg Glu Glu Lys  
100 105 110

Arg Trp Arg Trp Ile Asn Asn Ser Val Phe Asn Gly Asn Val Thr Asn  
115 120 125

Gln Asn Gln Asn Phe Asn Cys Ala Thr Ile Gly Leu Thr Lys Thr Phe  
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Asp Ala Ala Ser Cys Asp Ile Ser Tyr Arg Arg Ile Cys Glu Lys Asn  
145 150 155 160

Ala Lys

<210> 86

<211> 187

<212> PRT

<213> Homo sapiens

<400> 86

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Lys Ser Asn Asp Gly Phe Thr Thr Thr Arg Ser Tyr Gly Thr Val Ser					
	35		40		45
Gln Ile Phe Gly Ser Ser Ser Pro Ser Pro Asn Gly Phe Ile Thr Thr					
	50		55		60
Arg Ser Tyr Gly Thr Val Cys Pro Lys Asp Trp Glu Phe Tyr Gln Ala					
	65		70		75
Arg Cys Phe Phe Leu Ser Thr Ser Glu Ser Ser Trp Asn Glu Ser Arg					
		85		90	95
Asp Phe Cys Lys Gly Lys Gly Ser Thr Leu Ala Ile Val Asn Thr Pro					
	100		105		110
Glu Lys Leu Phe Leu Gln Asp Ile Thr Asp Ala Glu Lys Tyr Phe Ile					
	115		120		125
Gly Leu Ile Tyr His Arg Glu Glu Lys Arg Trp Arg Trp Ile Asn Asn					
	130		135		140
Ser Val Phe Asn Gly Asn Val Thr Asn Gln Asn Gln Asn Phe Asn Cys					
	145		150		155
Ala Thr Ile Gly Leu Thr Lys Thr Phe Asp Ala Ala Ser Cys Asp Ile					
		165		170	175
Ser Tyr Arg Arg Ile Cys Glu Lys Asn Ala Lys					
	180		185		

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<210> 88  
 <211> 190  
 <212> PRT  
 <213> Homo sapiens

<400> 88  
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0050130-01400



[illegible][illegible]





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Lys Ser Asn Asp Gly Phe Thr Thr Thr Arg Ser Tyr Gly Thr Val Ser  
 35 40 45

Gln Ile Phe Gly Ser Ser Ser Pro Ser Pro Asn Gly Phe Ile Thr Thr  
 50 55 60

Arg Ser Tyr Gly Thr Val Cys Pro Lys Asp Trp Glu Phe Tyr Gln Ala  
 65 70 75 80

Arg Cys Phe Phe Leu Ser Thr Ser Glu Ser Ser Trp Asn Glu Ser Arg  
 85 90 95

Asp Phe Cys Lys Gly Lys Gly Ser Thr Leu Ala Ile Val Asn Thr Pro  
 100 105 110

Glu Lys Leu Lys Phe Leu Gln Asp Ile Thr Asp Ala Glu Lys Tyr Phe  
 115 120 125

Ile Gly Leu Ile Tyr His Arg Glu Glu Lys Arg Trp Arg Trp Ile Asn  
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Asn Ser Val Phe Asn Gly Lys Tyr Val Asn Met Pro Gln Phe Pro Gly  
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<210> 94  
 <211> 21  
 <212> PRT  
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 Gly Phe Ile Thr Thr Arg Ser Tyr Gly Thr Val Cys Pro Lys Asp Trp  
 35 40 45  
 Glu Phe Tyr Gln Ala Arg Cys Phe Phe Leu Ser Thr Ser Glu Ser Ser  
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 85 90 95  
 Ala Glu Lys Tyr Phe Ile Gly Leu Ile Tyr His Arg Glu Glu Lys Arg  
 100 105 110  
 Trp Arg Trp Ile Asn Asn Ser Val Phe Asn Gly Lys Tyr Val Asn Met  
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<211> 495
<212> DNA
<213> Homo sapiens

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495

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<210> 98
<211> 165
<212> PRT
<213> Homo sapiens

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Lys Ser Asn Asp Gly Phe Thr Thr Thr Arg Ser Tyr Gly Thr Val Cys
          35             40             45

Pro Lys Asp Trp Glu Phe Tyr Gln Ala Arg Cys Phe Phe Leu Ser Thr

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50

55

60

Ser Glu Ser Ser Trp Asn Glu Ser Arg Asp Phe Cys Lys Gly Lys Gly  
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Ser Thr Leu Ala Ile Val Asn Thr Pro Glu Lys Leu Lys Phe Leu Gln  
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Asp Ile Thr Asp Ala Glu Lys Tyr Phe Ile Gly Leu Ile Tyr His Arg  
100 105 110

Glu Glu Lys Arg Trp Arg Trp Ile Asn Asn Ser Val Phe Asn Gly Asn  
115 120 125

Val Thr Asn Gln Asn Gln Asn Phe Asn Cys Ala Thr Ile Gly Leu Thr  
130 135 140

Lys Thr Phe Asp Ala Ala Ser Cys Asp Ile Ser Tyr Arg Arg Ile Cys  
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Glu Lys Asn Ala Lys  
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<210> 99

<211> 21

<212> PRT

<213> Homo sapiens

<400> 99

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Phe Leu Leu Tyr Phe  
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<210> 100

<211> 138

<212> PRT

<213> Homo sapiens

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Phe Phe Leu Ser Thr Ser Glu Ser Ser Trp Asn Glu Ser Arg Asp Phe  
 35 40 45

Cys Lys Gly Lys Gly Ser Thr Leu Ala Ile Val Asn Thr Pro Glu Lys  
 50 55 60

Leu Lys Phe Leu Gln Asp Ile Thr Asp Ala Glu Lys Tyr Phe Ile Gly  
 65 70 75 80

Leu Ile Tyr His Arg Glu Glu Lys Arg Trp Arg Trp Ile Asn Asn Ser  
 85 90 95

Val Phe Asn Gly Asn Val Thr Asn Gln Asn Gln Asn Phe Asn Cys Ala  
 100 105 110

Thr Ile Gly Leu Thr Lys Thr Phe Asp Ala Ala Ser Cys Asp Ile Ser  
 115 120 125

Tyr Arg Arg Ile Cys Glu Lys Asn Ala Lys  
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 <212> DNA  
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130

135

140

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&lt;211&gt; 21

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 104

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&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 105

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aagattagga gacacttctg tgcaggttct aaaaggagcc caatggcctg gggtgaggat 2460
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aaaaaggcaa tgaaaattta gcaagccact gaatttgagt ttctactttg ttctaatat 2640
gctgtgtgaa tcagtacagt tttcttacct tttcttggtc ttaatttcct tactgataaa 2700
atggggtagt aatacctatc tcaaaaaatt attgcacata ttaaataaca ttctctatg 2760
tatctcaatg gcattagaca ttaggagaag cattttgtgg aggatttgaa gttgagatct 2820
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gtgccttaaa aatgttgtgg ccaagccaca tgagatcaaa gacacacttt tcatgacctc 3000
aaatgtgggc ccagcctagg tcagccaacc cccatccaac ccttagactc acgaacaaat 3060
ccacctgaga tcagcagagc caccctagat cagctgaaac tctaagcaca aaaataaaaa 3120
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tgcaatctcc atctggcctt catccttctc cctttattgt cctttcgtgt attgttcac 3240
cagcaaccag gatgatcttg ttaaaacatt aaacagattc tgtcaykctt tmaaaaaaaa 3300
aaaagccatg aaattntagc aagccactga atttgagttt tcaactttgg ttctaatatg 3360
ctgtgtgaat cagancagkt ttcttacctt ttcttggctt taatttcctt actgataaaa 3420
tggggwtgta atacctatct caaaaaatta ttgcacatat tarataacat tcctctatgt 3480

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atctcaatgg cattagacat taggagaagc attttgtgga ggatttgaag ttgagatctt 3540  
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tcagaacttg tttactcatt tataatatgg gaataaaaaat ttgtgcaagt cagagaaggg 3660  
tgccttaaaa atgttgtggc caagccacat gagatcaaag acacactttt catgacctca 3720  
aatgtggggc cagcctaggt cagccaaccc ccatccaacc cttagactca cgaacaaatc 3780  
cacctgagat cagcagagcc accctagatc agctgaaact ctaagcacia aaataaaaac 3840  
ttatcactgt aaaaaaaaaa aaaaaaaaaa aagaaagcac ctgcccgggc ggccgccc 3898

<210> 112  
<211> 405  
<212> DNA  
<213> Homo sapiens

<400> 112  
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ttcttatcca cttctgaatc atcttggaat gaaagcaggg acttttgcaa aggaaaagga 180  
tccacattgg caattgtcaa cagccagag aaactgaagt ttcttcagga cataactgat 240  
gctgagaagt attttatttg ctttaatttac catcgtgaag agaaaagggtg gcgttggatc 300  
aacaactctg tgttcaatgg caagtacgtg aacatgccac agtttctctgg ggatcttgggt 360  
ttgcttcaaa agaccaaacc tgagattgct gggttcaccc tggaa 405

<210> 113  
<211> 135  
<212> PRT  
<213> Homo sapiens

<400> 113  
Met Asn Trp His Met Ile Ile Ser Gly Leu Ile Val Val Val Leu Lys  
1 5 10 15  
Val Val Gly Met Thr Leu Phe Leu Leu Tyr Phe Cys Pro Lys Asp Trp  
20 25 30  
Glu Phe Tyr Gln Ala Arg Cys Phe Phe Leu Ser Thr Ser Glu Ser Ser  
35 40 45  
Trp Asn Glu Ser Arg Asp Phe Cys Lys Gly Lys Gly Ser Thr Leu Ala  
50 55 60  
Ile Val Asn Thr Pro Glu Lys Leu Lys Phe Leu Gln Asp Ile Thr Asp  
65 70 75 80  
Ala Glu Lys Tyr Phe Ile Gly Leu Ile Tyr His Arg Glu Glu Lys Arg  
85 90 95

Trp Arg Trp Ile Asn Asn Ser Val Phe Asn Gly Lys Tyr Val Asn Met  
 100 105 110

Pro Gln Phe Pro Gly Asp Leu Gly Leu Leu Gln Lys Thr Lys Pro Glu  
 115 120 125

Ile Ala Gly Phe Thr Leu Glu  
 130 135

<210> 114

<211> 22

<212> PRT

<213> Homo sapiens

<400> 114

Ile Ser Gly Leu Ile Val Val Val Leu Lys Val Val Gly Met Thr Leu  
 1 5 10 15

Phe Leu Leu Tyr Phe Cys  
 20

<210> 115

<211> 107

<212> PRT

<213> Homo sapiens

<400> 115

Pro Lys Asp Trp Glu Phe Tyr Gln Ala Arg Cys Phe Phe Leu Ser Thr  
 1 5 10 15

Ser Glu Ser Ser Trp Asn Glu Ser Arg Asp Phe Cys Lys Gly Lys Gly  
 20 25 30

Ser Thr Leu Ala Ile Val Asn Thr Pro Glu Lys Leu Lys Phe Leu Gln  
 35 40 45

Asp Ile Thr Asp Ala Glu Lys Tyr Phe Ile Gly Leu Ile Tyr His Arg  
 50 55 60

Glu Glu Lys Arg Trp Arg Trp Ile Asn Asn Ser Val Phe Asn Gly Lys  
 65 70 75 80

Tyr Val Asn Met Pro Gln Phe Pro Gly Asp Leu Gly Leu Leu Gln Lys  
 85 90 95

Thr Lys Pro Glu Ile Ala Gly Phe Thr Leu Glu



<210> 116  
<400> 116  
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<210> 117  
<400> 117  
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<210> 118  
<400> 118  
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<210> 119  
<400> 119  
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<210> 120  
<400> 120  
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<210> 121  
<211> 1909  
<212> DNA  
<213> Homo sapiens

<400> 121  
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gagagtgtcg gccttcattg aaaacaacat cgtgggtttt gaaaacttct gggaaggact 120  
gtggatgaat tgcgtgaggc aggctaacat caggatgcag tgcaaaatct atgattccct 180  
gctggctctt tctccggacc tacaggcagc cagaggactg atgtgtgctg cttccgtgat 240  
gtccttcttg gctttcatga tggccatcct tggcatgaaa tgcaccagggt gcacggggga 300  
caatgagaag gtgaaggctc acattctgct gacggctgga atcatcttca tcatcacggg 360  
catggtggtg ctcatccctg tgagctgggt tgccaatgcc atcatcagag atttctataa 420  
ctcaatagtg aatggtgccc aaaaacgtga gcttgagaaa gctctctact taggatggac 480  
cacggcactg gtgctgattg ttggaggagc tctgttctgc tgcgtttttt gttgcaacga 540  
aaagagcagt agctacagat actcgatacc ttcccatcgc acaacccaaa aaagttatca 600  
caccggaaaag aagtcaccga gcgtctactc cagaagttag tatgtgtagt tgtgtatgtt 660  
tttttaactt tactataaag ccatgcaaat gacaaaaatc tatattactt tctcaaaatg 720  
gaccccaaag aaactttgat ttactgttct taactgccta atcttaatta caggaactgt 780  
gcatcagcta tttatgattc tataagctat ttcagcagaa tgagatatta aacccaatgc 840



Met Pro Gln Trp Arg Val Ser Ala Phe Ile Glu Asn Asn Ile Val Val  
 20 25 30  
 Phe Glu Asn Phe Trp Glu Gly Leu Trp Met Asn Cys Val Arg Gln Ala  
 35 40 45  
 Asn Ile Arg Met Gln Cys Lys Ile Tyr Asp Ser Leu Leu Ala Leu Ser  
 50 55 60  
 Pro Asp Leu Gln Ala Ala Arg Gly Leu Met Cys Ala Ala Ser Val Met  
 65 70 75 80  
 Ser Phe Leu Ala Phe Met Met Ala Ile Leu Gly Met Lys Cys Thr Arg  
 85 90 95  
 Cys Thr Gly Asp Asn Glu Lys Val Lys Ala His Ile Leu Leu Thr Ala  
 100 105 110  
 Gly Ile Ile Phe Ile Ile Thr Gly Met Val Val Leu Ile Pro Val Ser  
 115 120 125  
 Trp Val Ala Asn Ala Ile Ile Arg Asp Phe Tyr Asn Ser Ile Val Asn  
 130 135 140  
 Val Ala Gln Lys Arg Glu Leu Gly Glu Ala Leu Tyr Leu Gly Trp Thr  
 145 150 155 160  
 Thr Ala Leu Val Leu Ile Val Gly Gly Ala Leu Phe Cys Cys Val Phe  
 165 170 175  
 Cys Cys Asn Glu Lys Ser Ser Ser Tyr Arg Tyr Ser Ile Pro Ser His  
 180 185 190  
 Arg Thr Thr Gln Lys Ser Tyr His Thr Gly Lys Lys Ser Pro Ser Val  
 195 200 205  
 Tyr Ser Arg Ser Gln Tyr Val  
 210 215

<210> 124

<211> 24

<212> PRT

<213> Homo sapiens

<400> 124

Leu Phe Leu Gly Gly Val Gly Met Val Gly Thr Val Ala Val Thr Val  
 1 5 10 15

Met Pro Gln Trp Arg Val Ser Ala  
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<210> 125

<211> 47

<212> PRT

<213> Homo sapiens

<400> 125

Phe Ile Glu Asn Asn Ile Val Val Phe Glu Asn Phe Trp Glu Gly Leu  
1 5 10 15

Trp Met Asn Cys Val Arg Gln Ala Asn Ile Arg Met Gln Cys Lys Ile  
20 25 30

Tyr Asp Ser Leu Leu Ala Leu Ser Pro Asp Leu Gln Ala Ala Arg  
35 40 45

<210> 126

<211> 21

<212> PRT

<213> Homo sapiens

<400> 126

Gly Leu Met Cys Ala Ala Ser Val Met Ser Phe Leu Ala Phe Met Met  
1 5 10 15

Ala Ile Leu Gly Met  
20

<210> 127

<211> 15

<212> PRT

<213> Homo sapiens

<400> 127

Lys Cys Thr Arg Cys Thr Gly Asp Asn Glu Lys Val Lys Ala His  
1 5 10 15

<210> 128

<211> 24

<212> PRT

<213> Homo sapiens

<400> 128

Ile Leu Leu Thr Ala Gly Ile Ile Phe Ile Ile Thr Gly Met Val Val  
1 5 10 15

Leu Ile Pro Val Ser Trp Val Ala  
20

<210> 129

<211> 22

<212> PRT

<213> Homo sapiens

<400> 129

Asn Ala Ile Ile Arg Asp Phe Tyr Asn Ser Ile Val Asn Val Ala Gln  
1 5 10 15

Lys Arg Glu Leu Gly Glu  
20

<210> 130

<211> 25

<212> PRT

<213> Homo sapiens

<400> 130

Ala Leu Tyr Leu Gly Trp Thr Thr Ala Leu Val Leu Ile Val Gly Gly  
1 5 10 15

Ala Leu Phe Cys Cys Val Phe Cys Cys  
20 25

<210> 131

<211> 37

<212> PRT

<213> Homo sapiens

<400> 131

Asn Glu Lys Ser Ser Ser Tyr Arg Tyr Ser Ile Pro Ser His Arg Thr  
1 5 10 15

Thr Gln Lys Ser Tyr His Thr Gly Lys Lys Ser Pro Ser Val Tyr Ser  
20 25 30

Arg Ser Gln Tyr Val

&lt;210&gt; 132

&lt;211&gt; 225

&lt;212&gt; PRT

&lt;213&gt; Mus sp.

&lt;400&gt; 132

Met Ala Thr Tyr Ala Leu Gln Met Ala Ala Leu Val Leu Gly Gly Val  
 1 5 10 15

Gly Met Val Gly Thr Val Ala Val Thr Ile Met Pro Gln Trp Arg Val  
 20 25 30

Ser Ala Phe Ile Glu Ser Asn Ile Val Val Phe Glu Asn Arg Trp Glu  
 35 40 45

Gly Leu Trp Met Asn Cys Met Arg His Ala Asn Ile Arg Met Gln Cys  
 50 55 60

Lys Val Tyr Asp Ser Leu Leu Ala Leu Ser Pro Asp Leu Gln Ala Ser  
 65 70 75 80

Arg Gly Leu Met Cys Ala Ala Ser Val Leu Ala Phe Leu Ala Phe Met  
 85 90 95

Thr Ala Ile Leu Gly Met Lys Cys Thr Arg Cys Thr Gly Asp Asp Glu  
 100 105 110

Asn Val Lys Ser Arg Ile Leu Leu Thr Ala Gly Ile Ile Phe Phe Ile  
 115 120 125

Thr Gly Leu Val Val Leu Ile Pro Val Ser Trp Val Ala Asn Ser Ile  
 130 135 140

Ile Arg Asp Phe Tyr Asn Pro Leu Val Asp Val Ala Leu Lys Arg Glu  
 145 150 155 160

Leu Gly Glu Ala Leu Tyr Ile Gly Trp Thr Thr Ala Leu Val Leu Ile  
 165 170 175

Ala Gly Gly Ala Leu Phe Cys Cys Val Phe Cys Cys Thr Glu Arg Ser  
 180 185 190

Asn Ser Tyr Arg Tyr Ser Val Pro Ser His Arg Thr Thr Gln Arg Ser  
 195 200 205

115  
120  
125  
130  
135  
140  
145  
150  
155  
160  
165  
170  
175  
180  
185  
190  
195  
200  
205

Phe His Ala Glu Lys Arg Ser Pro Ser Ile Tyr Ser Lys Ser Gln Tyr  
 210 215 220

Val  
 225

<210> 133  
 <211> 678  
 <212> PRT  
 <213> Mus sp.

<400> 133  
 Ala Thr Gly Gly Cys Ala Ala Cys Cys Thr Ala Cys Gly Cys Thr Cys  
 1 5 10 15

Thr Thr Cys Ala Ala Ala Thr Gly Gly Cys Thr Gly Cys Ala Cys Thr  
 20 25 30

Gly Gly Thr Gly Cys Thr Thr Gly Gly Thr Gly Gly Thr Gly Thr Thr  
 35 40 45

Gly Gly Cys Ala Thr Gly Gly Thr Gly Gly Gly Cys Ala Cys Gly Gly  
 50 55 60

Thr Gly Gly Cys Thr Gly Thr Gly Ala Cys Thr Ala Thr Cys Ala Thr  
 65 70 75 80

Gly Cys Cys Thr Cys Ala Gly Thr Gly Gly Ala Gly Ala Gly Thr Gly  
 85 90 95

Thr Cys Thr Gly Cys Cys Thr Thr Cys Ala Thr Cys Gly Ala Ala Ala  
 100 105 110

Gly Thr Ala Ala Cys Ala Thr Thr Gly Thr Gly Gly Thr Gly Thr Thr  
 115 120 125

Thr Gly Ala Gly Ala Ala Cys Cys Gly Cys Thr Gly Gly Gly Ala Ala  
 130 135 140

Gly Gly Cys Thr Thr Gly Thr Gly Gly Ala Thr Gly Ala Ala Thr Thr  
 145 150 155 160

Gly Thr Ala Thr Gly Ala Gly Gly Cys Ala Thr Gly Cys Cys Ala Ala  
 165 170 175

Cys Ala Thr Cys Ala Gly Ala Ala Thr Gly Cys Ala Gly Thr Gly Cys  
 180 185 190





Ala Cys Cys Cys Ala Cys Thr Gly Gly Thr Gly Gly Ala Thr Gly Thr  
450 455 460

Gly Gly Cys Cys Cys Thr Ala Ala Ala Gly Cys Gly Cys Gly Ala Gly  
465 470 475 480

Cys Thr Gly Gly Gly Ala Gly Ala Ala Gly Cys Cys Cys Thr Cys Thr  
485 490 495

Ala Cys Ala Thr Ala Gly Gly Cys Thr Gly Gly Ala Cys Cys Ala Cys  
500 505 510

Ala Gly Cys Gly Cys Thr Gly Gly Thr Gly Cys Thr Gly Ala Thr Cys  
515 520 525

Gly Cys Thr Gly Gly Ala Gly Gly Ala Gly Cys Ala Cys Thr Gly Thr  
530 535 540

Thr Cys Thr Gly Thr Thr Gly Thr Gly Thr Gly Thr Thr Thr Thr Gly  
545 550 555 560

Thr Thr Gly Thr Ala Cys Thr Gly Ala Ala Ala Gly Gly Ala Gly Cys  
565 570 575

Ala Ala Cys Ala Gly Thr Thr Ala Cys Ala Gly Gly Thr Ala Cys Thr  
580 585 590

Cys Gly Gly Thr Ala Cys Cys Ala Thr Cys Cys Cys Ala Thr Cys Gly  
595 600 605

Cys Ala Cys Cys Ala Cys Thr Cys Ala Ala Cys Gly Gly Ala Gly Thr  
610 615 620

Thr Thr Cys Cys Ala Cys Gly Cys Cys Gly Ala Ala Ala Ala Gly Ala  
625 630 635 640

Gly Ala Thr Cys Thr Cys Cys Gly Ala Gly Cys Ala Thr Ala Thr Ala  
645 650 655

Cys Thr Cys Cys Ala Ala Ala Ala Gly Thr Cys Ala Gly Thr Ala Thr  
660 665 670

Gly Thr Gly Thr Ala Gly  
675

<210> 134



225		230		235		240
Ala Gly Thr Cys Cys Ala Thr Thr Ala Cys Ala Cys Thr Gly Ala Ala						
	245		250		255	
Thr Ala Ala Ala Thr Ala Gly Ala Ala Cys Thr Cys Ala Ala Cys Thr						
	260		265		270	
Ala Thr Thr Gly Cys Thr Thr Thr Thr Cys Ala Gly Gly Gly Ala Ala						
	275		280		285	
Ala Thr Cys Ala Thr Gly Gly Ala Thr Ala Gly Gly Gly Thr Thr Gly						
	290		295		300	
Ala Ala Gly Ala Ala Gly Gly Thr Thr Ala Cys Thr Ala Thr Thr Ala						
305		310		315		320
Ala Thr Thr Gly Thr Thr Thr Thr Ala Ala Ala Ala Cys Ala Gly						
	325		330		335	
Cys Thr Thr Ala Gly Gly Gly Ala Thr Thr Ala Ala Thr Gly Thr Cys						
	340		345		350	
Cys Thr Cys Cys Ala Thr Thr Thr Ala Thr Ala Ala Thr Gly Ala Ala						
	355		360		365	
Gly Ala Thr Thr Ala Ala Ala Ala Thr Gly Ala Ala Gly Gly Cys Thr						
	370		375		380	
Thr Thr Ala Ala Thr Cys Ala Gly Cys Ala Thr Thr Gly Thr Ala Ala						
385		390		395		400
Ala Gly Gly Ala Ala Ala Thr Thr Gly Ala Ala Thr Gly Gly Cys Thr						
	405		410		415	
Thr Thr Cys Thr Gly Ala Thr Ala Thr Gly Cys Thr Gly Thr Thr Thr						
	420		425		430	
Thr Thr Thr Ala Gly Cys Cys Thr Ala Gly Gly Ala Gly Thr Thr Ala						
	435		440		445	
Gly Ala Ala Ala Thr Cys Cys Thr Ala Ala Cys Thr Thr Cys Thr Thr						
	450		455		460	
Thr Ala Thr Cys Cys Thr Cys Thr Thr Cys Thr Cys Cys Cys Ala Gly						
465		470		475		480
Ala Gly Gly Cys Thr Thr Thr Thr Thr Thr Thr Thr Cys Thr Thr						



740	745	750
Gly Ala Gly Cys Ala Gly Ala Ala Ala Ala Ala Thr Ala Thr Gly Thr 755	760	765
Cys Thr Thr Gly Gly Thr Thr Thr Thr Cys Ala Thr Thr Thr Gly Cys 770	775	780
Thr Thr Ala Cys Cys Ala Ala Ala Ala Ala Ala Ala Cys Ala Ala Cys 785	790	795
Ala Ala Cys Ala Ala Ala Ala Ala Ala Ala Ala Gly Thr Thr Gly Thr Cys 805	810	815
Cys Thr Thr Thr Gly Ala Gly Ala Ala Cys Thr Thr Cys Ala Cys Cys 820	825	830
Thr Gly Cys Thr Cys Cys Thr Ala Thr Gly Thr Gly Gly Gly Thr Ala 835	840	845
Cys Cys Thr Gly Ala Gly Thr Cys Ala Ala Ala Ala Thr Thr Gly Thr 850	855	860
Cys Ala Thr Thr Thr Thr Thr Gly Thr Thr Cys Thr Gly Thr Gly Ala 865	870	875
Ala Ala Ala Ala Thr Ala Ala Ala Thr Thr Thr Cys Cys Thr Thr Cys 885	890	895
Thr Thr Gly Thr Ala Cys Cys Ala Thr Thr Thr Cys Thr Gly Thr Thr 900	905	910
Thr Ala Gly Thr Thr Thr Thr Ala Cys Thr Ala Ala Ala Ala Thr Cys 915	920	925
Thr Gly Thr Ala Ala Ala Thr Ala Cys Thr Gly Thr Ala Thr Thr Thr 930	935	940
Thr Thr Cys Thr Gly Thr Thr Thr Ala Thr Thr Cys Cys Ala Ala Ala 945	950	955
Thr Thr Thr Gly Ala Thr Gly Ala Ala Ala Cys Thr Gly Ala Cys Ala 965	970	975
Ala Thr Cys Cys Ala Ala Thr Thr Thr Gly Ala Ala Ala Gly Thr Thr 980	985	990
Thr Gly Thr Gly Thr Cys Gly Ala Cys Gly Thr Cys Thr Gly Thr Cys		



Ala Lys Ala Lys Thr Met Ile Val Ala Gly Val Val Phe Leu Leu Ala  
115 120 125

Gly Leu Met Val Ile Val Pro Val Ser Trp Thr Ala His Asn Ile Ile  
130 135 140

Gln Asp Phe Tyr Asn Pro Leu Val Ala Ser Gly Gln Lys Arg Glu Met  
145 150 155 160

Gly Ala Ser Leu Tyr Val Gly Trp Ala Ala Ser Gly Leu Leu Leu Leu  
165 170 175

Gly Gly Gly Leu Leu Cys Cys Asn Cys Pro Pro Arg Thr Asp Lys Pro  
180 185 190

Tyr Ser Ala Lys Tyr Ser Ala Ala Arg Ser Ala Ala Ala Ser Asn Tyr  
195 200 205

Val

<210> 136  
<211> 210  
<212> PRT  
<213> Mus sp.

<400> 136

Met Ala Ser Met Gly Leu Gln Val Leu Gly Ile Ser Leu Ala Val Leu  
1 5 10 15

Gly Trp Leu Gly Ile Ile Leu Ser Cys Ala Leu Pro Met Trp Arg Val  
20 25 30

Thr Ala Phe Ile Gly Ser Asn Ile Val Thr Ala Gln Thr Ser Trp Glu  
35 40 45

Gly Leu Trp Met Asn Cys Val Val Gln Ser Thr Gly Gln Met Gln Cys  
50 55 60

Lys Met Tyr Asp Ser Met Leu Ala Leu Pro Gln Asp Leu Gln Ala Ala  
65 70 75 80

Arg Ala Leu Met Val Ile Ser Ile Ile Val Gly Ala Leu Gly Met Leu  
85 90 95

Leu Ser Val Val Gly Gly Lys Cys Thr Asn Cys Met Glu Asp Glu Thr  
100 105 110

Val Lys Ala Lys Ile Met Ile Thr Ala Gly Ala Val Phe Ile Val Ala  
115 120 125

Ser Met Leu Ile Met Val Pro Val Ser Trp Thr Ala His Asn Val Ile  
130 135 140

Arg Asp Phe Tyr Asn Pro Met Val Ala Ser Gly Gln Lys Arg Glu Met  
145 150 155 160

Gly Ala Ser Leu Tyr Val Gly Trp Ala Ala Ser Gly Leu Leu Leu Leu  
165 170 175

Gly Gly Gly Leu Leu Cys Cys Ser Cys Pro Pro Arg Ser Asn Asp Lys  
180 185 190

Pro Tyr Ser Ala Lys Tyr Ser Ala Ala Arg Ser Val Pro Ala Ser Asn  
195 200 205

Tyr Val  
210

<210> 137  
<211> 248  
<212> PRT  
<213> Rattus sp.

<400> 137  
Met Ser Met Ser Leu Glu Ile Thr Gly Thr Ser Leu Ala Val Leu Gly  
1 5 10 15

Trp Leu Cys Thr Ile Val Cys Cys Ala Leu Pro Met Trp Arg Val Ser  
20 25 30

Ala Phe Ile Gly Ser Ser Ile Ile Thr Ala Gln Ile Thr Trp Glu Gly  
35 40 45

Leu Trp Met Asn Cys Val Gln Ser Thr Gly Gln Met Gln Cys Lys Met  
50 55 60

Tyr Asp Ser Leu Leu Ala Leu Pro Gln Asp Leu Gln Ala Ala Arg Ala  
65 70 75 80

Leu Ile Val Val Ser Ile Leu Leu Ala Ala Phe Gly Leu Leu Val Ala  
85 90 95

Leu Val Gly Ala Gln Cys Thr Asn Cys Val Gln Asp Glu Thr Ala Lys





Ile Leu Gly Met Lys Cys Thr Arg Cys Thr Gly Asp Asn Glu Lys Val  
 65 70 75 80

Lys Ala His Ile Leu Leu Thr Ala Gly Ile Ile Phe Ile Ile Thr Gly  
 85 90 95

Met Val Val Leu Ile Pro Val Ser Trp Val Ala Asn Ala Ile Ile Arg  
 100 105 110

Asp Phe Tyr Asn Ser Ile Val Asn Val Ala Gln Lys Arg Glu Leu Gly  
 115 120 125

Glu Ala Leu Tyr Leu Gly Trp Thr Thr Ala Leu Val Leu Ile Val Gly  
 130 135 140

Gly Ala Leu Phe Cys Cys Val Phe Cys Cys Asn Glu Lys Ser Ser Ser  
 145 150 155 160

Tyr Arg Tyr Ser Ile Pro Ser His Arg Thr Thr Gln Lys Ser Tyr His  
 165 170 175

Thr Gly Lys Lys Ser Pro Ser Val Tyr Ser Arg Ser Gln Tyr Val  
 180 185 190

<210> 139  
 <400> 139  
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<210> 140  
 <400> 140  
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<210> 141  
 <211> 323  
 <212> DNA  
 <213> Homo sapiens

<400> 141  
 cgagcggccg cccgggcagg tcagacatgg gccaaaggagc cagaggccgt ccgggggtctg 60  
 tgagttgagc ttgaggccgc aggatgaggg tcatcatggg gatagccagc ctgggggttcc 120  
 tctgggcagt attcctgctt cctcttgtgt ttgggggtccc cacagaggag actacctttg 180  
 gagaatctgt ggcctcccat ctcccaaaag gctgtcgacg atgctgtgac cccgaggacc 240  
 tgatgtcctc tgatgatacg gtccaggccc ctgtttcccc ttatgtcctg cctgaagtca 300  
 ggccgtacct cgcccgcgac cac 323

<210> 142  
 <211> 240  
 <212> DNA  
 <213> Homo sapiens

<400> 142  
 atgagggtca tcatggggat agccagcctg gggttcctct gggcagtatt cctgcttcct 60  
 cttgtgtttg gggccccac agaggagact acctttggag aatctgtggc ctcccatctc 120  
 cccaaaggct gtcgacgatg ctgtgacccc gaggacctga tgcctctga tgatacgggc 180  
 caggcccctg tttcccctta tgcctgcct gaagtcaggc cgtacctcg cgcgaccac 240

<210> 143  
 <211> 80  
 <212> PRT  
 <213> Homo sapiens

<400> 143  
 Met Arg Val Ile Met Gly Ile Ala Ser Leu Gly Phe Leu Trp Ala Val  
 1 5 10 15  
 Phe Leu Leu Pro Leu Val Phe Gly Val Pro Thr Glu Glu Thr Thr Phe  
 20 25 30  
 Gly Glu Ser Val Ala Ser His Leu Pro Lys Gly Cys Arg Arg Cys Cys  
 35 40 45  
 Asp Pro Glu Asp Leu Met Ser Ser Asp Asp Thr Val Gln Ala Pro Val  
 50 55 60  
 Ser Pro Tyr Val Leu Pro Glu Val Arg Pro Tyr Leu Gly Arg Asp His  
 65 70 75 80

<210> 144  
 <211> 24  
 <212> PRT  
 <213> Homo sapiens

<400> 144  
 Met Arg Val Ile Met Gly Ile Ala Ser Leu Gly Phe Leu Trp Ala Val  
 1 5 10 15  
 Phe Leu Leu Pro Leu Val Phe Gly

<210> 145  
 <211> 56  
 <212> PRT  
 <213> Homo sapiens

<400> 145  
 Val Pro Thr Glu Glu Thr Thr Phe Gly Glu Ser Val Ala Ser His Leu  
 1 5 10 15  
 Pro Lys Gly Cys Arg Arg Cys Cys Asp Pro Glu Asp Leu Met Ser Ser  
 20 25 30  
 Asp Asp Thr Val Gln Ala Pro Val Ser Pro Tyr Val Leu Pro Glu Val  
 35 40 45  
 Arg Pro Tyr Leu Gly Arg Asp His  
 50 55

<210> 146  
 <400> 146  
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<210> 147  
 <400> 147  
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<210> 148  
 <400> 148  
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<210> 149  
 <400> 149  
 000

<210> 150  
 <400> 150  
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<210> 151

<211> 546  
 <212> DNA  
 <213> Homo sapiens

<400> 151  
 cggacgcgtg ggcggacgcg tggggttatt tctttggttg ttaggtataa tatgggcatt 60  
 taaaaacaac acccagtttt gtacttgat aagtatggaa ttcttatata ggattgttgt 120  
 tggattcatt cttatcttta ctttttttaa tattaaggga cagaatacca agtgtccaat 180  
 gtcttggtat tatattgtta gggacttggg cactttgggg atattgactg tattctgggt 240  
 ttgccccctc actattttta atccagacta ttttatacct atcagtataa ctatagttct 300  
 tactcttctt cttggaattc tttttcttat tgtttattat gggagttttc acccaaacag 360  
 aagtgcagaa acaaaatgtg atgaaattga tggaaaacca gttctaagag aatgtagaat 420  
 gagatatttc ctaatggaat aagctattca tttatgatat atattttctt atattttggt 480  
 tcattgggta gtaaagaaaa tgtgtgttaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 540  
 aaaaaa 546

<210> 152  
 <211> 345  
 <212> DNA  
 <213> Homo sapiens

<400> 152  
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 aaggacaga ataccaagtg tccaatgtct tgttattata ttgttagggg actgggcact 120  
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 <213> Homo sapiens

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 Val Cys Pro Leu Thr Ile Phe Asn Pro Asp Tyr Phe Ile Pro Ile Ser  
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Ile Thr Ile Val Leu Thr Leu Leu Leu Gly Ile Leu Phe Leu Ile Val  
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Tyr Tyr Gly Ser Phe His Pro Asn Arg Ser Ala Glu Thr Lys Cys Asp  
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Leu Met Glu  
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<212> PRT  
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<400> 155  
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Gly Thr Leu Gly Ile Leu Thr Val Phe Trp Val Cys Pro Leu Thr Ile  
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Phe Asn Pro Asp Tyr Phe Ile Pro Ile Ser Ile Thr Ile Val Leu Thr  
35 40 45

Leu Leu Leu Gly Ile Leu Phe Leu Ile Val Tyr Tyr Gly Ser Phe His  
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Pro Asn Arg Ser Ala Glu Thr Lys Cys Asp Glu Ile Asp Gly Lys Pro  
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Val Leu Arg Glu Cys Arg Met Arg Tyr Phe Leu Met Glu  
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<210> 156

<211> 9

<212> PRT

<213> Homo sapiens

<400> 156

Gln Asn Thr Lys Cys Pro Met Ser Cys  
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<210> 157

<211> 18

<212> PRT

<213> Homo sapiens

<400> 157

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Trp Val

<210> 158

<211> 9

<212> PRT

<213> Homo sapiens

<400> 158

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<210> 159

<211> 24

<212> PRT

<213> Homo sapiens

<400> 159

Tyr Phe Ile Pro Ile Ser Ile Thr Ile Val Leu Thr Leu Leu Leu Gly  
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<210> 171  
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<212> DNA  
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[illegible][illegible]

00250130-014301

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Thr	Thr	Phe	Arg	Arg	Glu	Val	Met	Phe	Phe	Lys	Gly	Arg	His	Leu	Trp	290	295	300
Arg	Ile	Tyr	Tyr	Asp	Ile	Thr	Asp	Val	Glu	Phe	Glu	Leu	Ile	Ala	Ser	305	310	315
Phe	Trp	Pro	Ser	Leu	Pro	Ala	Asp	Leu	Gln	Ala	Ala	Tyr	Glu	Asn	Pro	325	330	335
Arg	Asp	Lys	Ile	Leu	Val	Phe	Lys	Asp	Glu	Asn	Phe	Trp	Met	Ile	Arg	340	345	350
Gly	Tyr	Ala	Val	Leu	Pro	Asp	Tyr	Pro	Lys	Ser	Ile	His	Thr	Leu	Gly	355	360	365
Phe	Pro	Gly	Arg	Val	Lys	Lys	Ile	Asp	Ala	Ala	Val	Cys	Asp	Lys	Thr	370	375	380
Thr	Arg	Lys	Thr	Tyr	Phe	Phe	Val	Gly	Ile	Trp	Cys	Trp	Arg	Phe	Asp	385	390	395
Glu	Met	Thr	Gln	Thr	Met	Asp	Lys	Gly	Phe	Pro	Gln	Arg	Val	Val	Lys	405	410	415
His	Phe	Pro	Gly	Ile	Ser	Ile	Arg	Val	Asp	Ala	Ala	Phe	Gln	Tyr	Lys	420	425	430
Gly	Phe	Phe	Phe	Phe	Ser	Arg	Gly	Ser	Lys	Gln	Phe	Glu	Tyr	Asn	Ile	435	440	445
Lys	Thr	Lys	Asn	Ile	Thr	Arg	Ile	Met	Arg	Thr	Asn	Thr	Trp	Phe	Gln	450	455	460
Cys	Lys	Glu	Pro	Lys	Asn	Ser	Ser	Phe	Gly	Phe	Asp	Ile	Asn	Lys	Glu	465	470	475
Lys	Ala	His	Ser	Gly	Gly	Ile	Lys	Ile	Leu	Tyr	His	Lys	Ser	Leu	Ser	485	490	495
Leu	Phe	Ile	Phe	Gly	Ile	Val	His	Leu	Leu	Lys	Asn	Thr	Ser	Ile	Tyr	500	505	510

Gln

<210> 174

<211> 17

<212> PRT

<213> Homo sapiens

<400> 174

Met Lys Arg Leu Leu Leu Leu Phe Leu Phe Phe Ile Thr Phe Ser Ser  
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<210> 175

<211> 291

<212> PRT

<213> Homo sapiens

<400> 175

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Gln Ala Tyr Leu Asn Gln Phe Tyr Ser Leu Glu Ile Glu Gly Asn His  
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Leu Val Gln Ser Lys Asn Arg Ser Leu Ile Asp Asp Lys Ile Arg Glu  
35 40 45

Met Gln Ala Phe Phe Gly Leu Thr Val Thr Gly Lys Leu Asp Ser Asn  
50 55 60

Thr Leu Glu Ile Met Lys Thr Pro Arg Cys Gly Val Pro Asp Val Gly  
65 70 75 80

Gln Tyr Gly Tyr Thr Leu Pro Gly Trp Arg Lys Tyr Asn Leu Thr Tyr  
85 90 95

Arg Ile Ile Asn Tyr Thr Pro Asp Met Ala Arg Ala Ala Val Asp Glu  
100 105 110

Ala Ile Gln Glu Gly Leu Glu Val Trp Ser Lys Val Thr Pro Leu Lys  
115 120 125



102250-04163200

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Glu	Met	Gln	Arg	Phe	Phe	Gly	Leu	Asn	Val	Thr	Gly	Lys	Pro	Asn	Glu	65	70	75	80
Glu	Thr	Leu	Asp	Met	Met	Lys	Lys	Pro	Arg	Cys	Gly	Val	Pro	Asp	Ser	85	90	95	
Gly	Gly	Phe	Met	Leu	Thr	Pro	Gly	Asn	Pro	Lys	Trp	Glu	Arg	Thr	Asn	100	105	110	
Leu	Thr	Tyr	Arg	Ile	Arg	Asn	Tyr	Thr	Pro	Gln	Leu	Ser	Glu	Ala	Glu	115	120	125	
Val	Glu	Arg	Ala	Ile	Lys	Asp	Ala	Phe	Glu	Leu	Trp	Ser	Val	Ala	Ser	130	135	140	
Pro	Leu	Ile	Phe	Thr	Arg	Ile	Ser	Gln	Gly	Glu	Ala	Asp	Ile	Asn	Ile	145	150	155	160
Ala	Phe	Tyr	Gln	Arg	Asp	His	Gly	Asp	Asn	Ser	Pro	Phe	Asp	Gly	Pro	165	170	175	
Asn	Gly	Ile	Leu	Ala	His	Ala	Phe	Gln	Pro	Gly	Gln	Gly	Ile	Gly	Gly	180	185	190	
Asp	Ala	His	Phe	Asp	Ala	Glu	Glu	Thr	Trp	Thr	Asn	Thr	Ser	Ala	Asn	195	200	205	
Tyr	Asn	Leu	Phe	Leu	Val	Ala	Ala	His	Glu	Phe	Gly	His	Ser	Leu	Gly	210	215	220	
Leu	Ala	His	Ser	Ser	Asp	Pro	Gly	Ala	Leu	Met	Tyr	Pro	Asn	Tyr	Ala	225	230	235	240
Phe	Arg	Glu	Thr	Ser	Asn	Tyr	Ser	Leu	Pro	Gln	Asp	Asp	Ile	Asp	Gly	245	250	255	
Ile	Gln	Ala	Ile	Tyr	Gly	Leu	Ser	Ser	Asn	Pro	Ile	Gln	Pro	Thr	Gly	260	265	270	
Pro	Ser	Thr	Pro	Lys	Pro	Cys	Asp	Pro	Ser	Leu	Thr	Phe	Asp	Ala	Ile	275	280	285	
Thr	Thr	Leu	Arg	Gly	Glu	Ile	Leu	Phe	Phe	Lys	Asp	Arg	Tyr	Phe	Trp	290	295	300	

Arg Arg His Pro Gln Leu Gln Arg Val Glu Met Asn Phe Ile Ser Leu  
305 310 315 320

Phe Trp Pro Ser Leu Pro Thr Gly Ile Gln Ala Ala Tyr Glu Asp Phe  
325 330 335

Asp Arg Asp Leu Ile Phe Leu Phe Lys Gly Asn Gln Tyr Trp Ala Leu  
340 345 350

Ser Gly Tyr Asp Ile Leu Gln Gly Tyr Pro Lys Asp Ile Ser Asn Tyr  
355 360 365

Gly Phe Pro Ser Ser Val Gln Ala Ile Asp Ala Ala Val Phe Tyr Arg  
370 375 380

Ser Lys Thr Tyr Phe Phe Val Asn Asp Gln Phe Trp Arg Tyr Asp Asn  
385 390 395 400

Gln Arg Gln Phe Met Glu Pro Gly Tyr Pro Lys Ser Ile Ser Gly Ala  
405 410 415

Phe Pro Gly Ile Glu Ser Lys Val Asp Ala Val Phe Gln Gln Glu His  
420 425 430

Phe Phe His Val Phe Ser Gly Pro Arg Tyr Tyr Ala Phe Asp Leu Ile  
435 440 445

Ala Gln Arg Val Thr Arg Val Ala Arg Gly Asn Lys Trp Leu Asn Cys  
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Arg Tyr Gly  
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<210> 177

<211> 1401

<212> PRT

<213> Homo sapiens

<400> 177

Ala Thr Gly Thr Thr Cys Thr Cys Cys Cys Thr Gly Ala Ala Gly Ala  
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Cys Gly Cys Thr Thr Cys Cys Ala Thr Thr Thr Cys Thr Gly Cys Thr  
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Cys Thr Thr Ala Cys Thr Cys Cys Ala Thr Gly Thr Gly Cys Ala Gly





290		295		300
Cys Cys Cys Cys Ala Gly Gly Ala Ala Ala Cys Cys Cys Cys Ala Ala				
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Gly Thr Gly Gly Gly Ala Ala Cys Gly Cys Ala Cys Thr Ala Ala Cys				
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Thr Thr Gly Ala Cys Cys Thr Ala Cys Ala Gly Gly Ala Thr Thr Cys				
	340		345	350
Gly Ala Ala Ala Cys Thr Ala Thr Ala Cys Cys Cys Cys Ala Cys Ala				
	355		360	365
Gly Cys Thr Gly Thr Cys Ala Gly Ala Gly Gly Cys Thr Gly Ala Gly				
	370		375	380
Gly Thr Ala Gly Ala Ala Ala Gly Ala Gly Cys Thr Ala Thr Cys Ala				
385		390		395 400
Ala Gly Gly Ala Thr Gly Cys Cys Thr Thr Thr Gly Ala Ala Cys Thr				
	405		410	415
Cys Thr Gly Gly Ala Gly Thr Gly Thr Thr Gly Cys Ala Thr Cys Ala				
	420		425	430
Cys Cys Thr Cys Thr Cys Ala Thr Cys Thr Thr Cys Ala Cys Cys Ala				
	435		440	445
Gly Gly Ala Thr Cys Thr Cys Ala Cys Ala Gly Gly Gly Ala Gly Ala				
	450		455	460
Gly Gly Cys Ala Gly Ala Thr Ala Thr Cys Ala Ala Cys Ala Thr Thr				
465		470		475 480
Gly Cys Thr Thr Thr Thr Thr Ala Cys Cys Ala Ala Ala Gly Ala Gly				
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Ala Thr Cys Ala Cys Gly Gly Thr Gly Ala Cys Ala Ala Thr Thr Cys				
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Thr Cys Cys Ala Thr Thr Thr Gly Ala Thr Gly Gly Ala Cys Cys Cys				
	515		520	525
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	530		535	540
Ala Thr Gly Cys Cys Thr Thr Thr Cys Ala Gly Cys Cys Ala Gly Gly				

545		550		555		560
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	580			585		590
Cys Cys Gly Ala Ala Gly Ala Ala Ala Cys Ala Thr Gly Gly Ala Cys						
	595			600		605
Cys Ala Ala Cys Ala Cys Cys Thr Cys Cys Gly Cys Ala Ala Ala Thr						
	610			615		620
Thr Ala Cys Ala Ala Cys Thr Thr Gly Thr Thr Thr Cys Thr Thr Gly						
	625			630		635
Thr Thr Gly Cys Thr Gly Cys Thr Cys Ala Thr Gly Ala Ala Thr Thr						
	645			650		655
Thr Gly Gly Cys Cys Ala Thr Thr Cys Thr Thr Thr Gly Gly Gly Gly						
	660			665		670
Cys Thr Cys Gly Cys Thr Cys Ala Cys Thr Cys Cys Thr Cys Thr Gly						
	675			680		685
Ala Cys Cys Cys Thr Gly Gly Thr Gly Cys Cys Thr Thr Gly Ala Thr						
	690			695		700
Gly Thr Ala Thr Cys Cys Cys Ala Ala Cys Thr Ala Thr Gly Cys Thr						
	705			710		715
Thr Thr Cys Ala Gly Gly Gly Ala Ala Ala Cys Cys Ala Gly Cys Ala						
	725			730		735
Ala Cys Thr Ala Cys Thr Cys Ala Cys Thr Cys Cys Cys Thr Cys Ala						
	740			745		750
Ala Gly Ala Thr Gly Ala Cys Ala Thr Cys Gly Ala Thr Gly Gly Cys						
	755			760		765
Ala Thr Thr Cys Ala Gly Gly Cys Cys Ala Thr Cys Thr Ala Thr Gly						
	770			775		780
Gly Ala Cys Thr Thr Thr Cys Ala Ala Gly Cys Ala Ala Cys Cys Cys						
	785			790		795
Thr Ala Thr Cys Cys Ala Ala Cys Cys Thr Ala Cys Thr Gly Gly Ala						





1315	1320	1325
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Gly Ala Gly Thr Thr Gly Cys Ala Ala Gly Ala Gly Gly Cys Ala Ala		
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 <213> Homo sapiens

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35 40 45
Met Gln Ala Phe Phe Gly Leu Thr Val Thr Gly Lys Leu Asp Ser Asn
50 55 60
Thr Leu Glu Ile Met Lys Thr Pro Arg Cys Gly Val Pro Asp Val Gly
65 70 75 80
Gln Tyr Gly Tyr Thr Leu Pro Gly Trp Arg Lys Tyr Asn Leu Thr Tyr
85 90 95
Arg Ile Ile Asn Tyr Thr Pro Asp Met Ala Arg Ala Ala Val Asp Glu
100 105 110
Ala Ile Gln Glu Gly Leu Glu Val Trp Ser Lys Val Thr Pro Leu Lys
115 120 125

Phe	Thr	Lys	Ile	Ser	Lys	Gly	Ile	Ala	Asp	Ile	Met	Ile	Ala	Phe	Arg	130	135	140	
Thr	Arg	Val	His	Gly	Arg	Cys	Pro	Arg	Tyr	Phe	Asp	Gly	Pro	Leu	Gly	145	150	155	160
Val	Leu	Gly	His	Ala	Phe	Pro	Pro	Gly	Pro	Gly	Leu	Gly	Gly	Asp	Thr	165	170	175	
His	Phe	Asp	Glu	Asp	Glu	Asn	Trp	Thr	Lys	Asp	Gly	Ala	Gly	Phe	Asn	180	185	190	
Leu	Phe	Leu	Val	Ala	Ala	His	Glu	Phe	Gly	His	Ala	Leu	Gly	Leu	Ser	195	200	205	
His	Ser	Asn	Asp	Gln	Thr	Ala	Leu	Met	Phe	Pro	Asn	Tyr	Val	Ser	Leu	210	215	220	
Asp	Pro	Arg	Lys	Tyr	Pro	Leu	Ser	Gln	Asp	Asp	Ile	Asn	Gly	Ile	Gln	225	230	235	240
Ser	Ile	Tyr	Gly	Gly	Leu	Pro	Lys	Val	Pro	Ala	Lys	Pro	Lys	Glu	Pro	245	250	255	
Thr	Ile	Pro	His	Ala	Cys	Asp	Pro	Asp	Leu	Thr	Phe	Asp	Ala	Ile	Thr	260	265	270	
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Ile	Tyr	Tyr	Asp	Ile	Thr	Asp	Val	Glu	Phe	Glu	Leu	Ile	Ala	Ser	Phe	290	295	300	
Trp	Pro	Ser	Leu	Pro	Ala	Asp	Leu	Gln	Ala	Ala	Tyr	Glu	Asn	Pro	Arg	305	310	315	320
Asp	Lys	Ile	Leu	Val	Phe	Lys	Asp	Glu	Asn	Phe	Trp	Met	Ile	Arg	Gly	325	330	335	
Tyr	Ala	Val	Leu	Pro	Asp	Tyr	Pro	Lys	Ser	Ile	His	Thr	Leu	Gly	Phe	340	345	350	
Pro	Gly	Arg	Val	Lys	Lys	Ile	Asp	Ala	Ala	Val	Cys	Asp	Lys	Thr	Thr	355	360	365	
Arg	Lys	Thr	Tyr	Phe	Phe	Val	Gly	Ile	Trp	Cys	Trp	Arg	Phe	Asp	Glu	370	375	380	

Met Thr Gln Thr Met Asp Lys Gly Phe Pro Gln Arg Val Val Lys His  
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Phe Pro Gly Ile Ser Ile Arg Val Asp Ala Ala Phe Gln Tyr Lys Gly  
 405 410 415

Phe Phe Phe Phe Ser Arg Gly Ser Lys Gln Phe Glu Tyr Asn Ile Lys  
 420 425 430

Thr Lys Asn Ile Thr Arg Ile Met Arg Thr Asn Thr Trp Phe Gln Cys  
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<210> 179  
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 <212> PRT  
 <213> Homo sapiens

<400> 179  
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<210> 180  
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 <212> PRT  
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<400> 180  
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<210> 181  
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<400> 181



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<210> 182  
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 <212> DNA  
 <213> Mus sp.



Glu	Met	Gln	Ala	Phe	Phe	Gly	Leu	Thr	Val	Thr	Gly	Lys	Leu	Asp	Ser	65	70	75	80
Asp	Thr	Leu	Ala	Ile	Met	Lys	Val	Pro	Arg	Cys	Gly	Val	Pro	Asp	Val	85	90	95	
Gly	Gln	Tyr	Gly	Tyr	Thr	Leu	Pro	Gly	Trp	Arg	Lys	Tyr	Ser	Leu	Thr	100	105	110	
Tyr	Arg	Ile	Met	Asn	Tyr	Thr	Pro	Asp	Met	Thr	Pro	Ala	Asp	Val	Asp	115	120	125	
Glu	Ala	Ile	Gln	Lys	Ala	Leu	Gln	Val	Trp	Ser	Lys	Val	Thr	Pro	Leu	130	135	140	
Thr	Phe	Thr	Arg	Ile	Ser	Lys	Gly	Val	Ala	Asp	Ile	Met	Ile	Ala	Phe	145	150	155	160
Arg	Thr	Gly	Val	His	Gly	Trp	Cys	Pro	Arg	His	Phe	Asp	Gly	Pro	Leu	165	170	175	
Gly	Val	Leu	Gly	His	Ala	Phe	Pro	Pro	Gly	Leu	Gly	Leu	Gly	Gly	Asp	180	185	190	
Thr	His	Phe	Asp	Glu	Asp	Glu	Thr	Trp	Ile	Ala	Lys	Asp	Gly	Glu	Gly	195	200	205	
Phe	Asn	Leu	Phe	Leu	Val	Ala	Ala	His	Glu	Phe	Gly	His	Ser	Leu	Gly	210	215	220	
Leu	Ser	His	Ser	Asn	Asp	Gln	Thr	Ala	Leu	Met	Phe	Pro	Asn	Tyr	Ile	225	230	235	240
Ser	Leu	Asp	Pro	Ser	Lys	Tyr	Pro	Leu	Ser	Gln	Asp	Asp	Ile	Asp	Gly	245	250	255	
Ile	Gln	Ser	Ile	Tyr	Gly	Ser	Pro	Pro	Lys	Val	Thr	Thr	Lys	Pro	Ser	260	265	270	
Gly	Asn	Ser	Glu	Pro	His	Ala	Cys	Asp	Pro	Thr	Leu	Thr	Phe	Asp	Ala	275	280	285	
Ile	Thr	Thr	Phe	Arg	Arg	Glu	Val	Met	Phe	Phe	Lys	Gly	Arg	His	Leu	290	295	300	
Trp	Arg	Val	Tyr	Ser	Asp	Ile	Ala	Gly	Ala	Glu	Phe	Glu	Phe	Ile	Asp	305	310	315	320

Ser Phe Trp Pro Ser Leu Pro Ala Asp Leu Gln Ala Ala Tyr Glu Ser  
325 330 335

Pro Arg Asp Glu Leu Leu Val Phe Lys Asp Glu Asn Phe Trp Val Ile  
340 345 350

Arg Gly Tyr Ser Val Leu Pro Gly Tyr Pro Lys Ser Ile His Thr Leu  
355 360 365

Gly Phe Pro Arg Arg Val Lys Lys Ile Asp Ala Ala Val Cys Asp His  
370 375 380

Asp Thr Arg Lys Thr Phe Phe Phe Val Gly Ile Trp Cys Trp Arg Tyr  
385 390 395 400

Asp Glu Met Ala Gln Ala Met Asp Arg Gly Phe Pro Gln Arg Ile Ile  
405 410 415

Lys Cys Phe Pro Gly Ile Arg Leu Arg Val Asp Ala Val Phe Gln His  
420 425 430

Asn Gly Phe Leu Tyr Phe Phe His Gly Ser Arg Gln Phe Glu Tyr Asp  
435 440 445

Met Lys Ala Lys Asn Ile Thr Gln Val Ile Lys Thr Asn Ser Trp Phe  
450 455 460

Leu Cys Asn Glu Pro Leu Asn Ala Ser Phe Asn Val Ser Val Lys Gly  
465 470 475 480

Lys Ala Asn Ser Ile Gly Thr Val Ile Leu His His Lys Arg Leu Ser  
485 490 495

Leu Leu Thr Phe Ser Ile Val His Val Leu Thr Lys Thr Tyr Asn  
500 505 510

<210> 184

<211> 17

<212> PRT

<213> Mus sp.

<400> 184

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Ala



102106169260

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225	230	235 240
Gln Ser Ile Tyr Gly Ser Pro Pro Lys Val Thr Thr Lys Pro Ser Gly		
	245	250 255
Asn Ser Glu Pro His Ala Cys Asp Pro Thr Leu Thr Phe Asp Ala Ile		
	260	265 270
Thr Thr Phe Arg Arg Glu Val Met Phe Phe Lys Gly Arg His Leu Trp		
	275	280 285
Arg Val Tyr Ser Asp Ile Ala Gly Ala Glu Phe Glu Phe Ile Asp Ser		
	290	295 300
Phe Trp Pro Ser Leu Pro Ala Asp Leu Gln Ala Ala Tyr Glu Ser Pro		
305	310	315 320
Arg Asp Glu Leu Leu Val Phe Lys Asp Glu Asn Phe Trp Val Ile Arg		
	325	330 335
Gly Tyr Ser Val Leu Pro Gly Tyr Pro Lys Ser Ile His Thr Leu Gly		
	340	345 350
Phe Pro Arg Arg Val Lys Lys Ile Asp Ala Ala Val Cys Asp His Asp		
	355	360 365
Thr Arg Lys Thr Phe Phe Phe Val Gly Ile Trp Cys Trp Arg Tyr Asp		
	370	375 380
Glu Met Ala Gln Ala Met Asp Arg Gly Phe Pro Gln Arg Ile Ile Lys		
385	390	395 400
Cys Phe Pro Gly Ile Arg Leu Arg Val Asp Ala Val Phe Gln His Asn		
	405	410 415
Gly Phe Leu Tyr Phe Phe His Gly Ser Arg Gln Phe Glu Tyr Asp Met		
	420	425 430
Lys Ala Lys Asn Ile Thr Gln Val Ile Lys Thr Asn Ser Trp Phe Leu		
	435	440 445
Cys Asn Glu Pro Leu Asn Ala Ser Phe Asn Val Ser Val Lys Gly Lys		
	450	455 460
Ala Asn Ser Ile Gly Thr Val Ile Leu His His Lys Arg Leu Ser Leu		

465

470

475

480

Leu Thr Phe Ser Ile Val His Val Leu Thr Lys Thr Tyr Asn

485

490

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000

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&lt;210&gt; 191

&lt;211&gt; 2628

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 191

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<210> 192  
 <211> 1059  
 <212> DNA  
 <213> Homo sapiens

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<210> 193
<211> 353
<212> PRT
<213> Homo sapiens

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<400> 193
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Thr Arg Pro Cys Phe Pro Gly Cys Gln Cys Glu Val Glu Thr Phe Gly
          20             25             30

Leu Phe Asp Ser Phe Ser Leu Thr Arg Val Asp Cys Ser Gly Leu Gly
          35             40             45

Pro His Ile Met Pro Val Pro Ile Pro Leu Asp Thr Ala His Leu Asp
          50             55             60

Leu Ser Ser Asn Arg Leu Glu Met Val Asn Glu Ser Val Leu Ala Gly
          65             70             75             80

Pro Gly Tyr Thr Thr Leu Ala Gly Leu Asp Leu Ser His Asn Leu Leu
          85             90             95

Thr Ser Ile Ser Pro Thr Ala Phe Ser Arg Leu Arg Tyr Leu Glu Ser
          100            105            110

Leu Asp Leu Ser His Asn Gly Leu Thr Ala Leu Pro Ala Glu Ser Phe
          115            120            125

Thr Ser Ser Pro Leu Ser Asp Val Asn Leu Ser His Asn Gln Leu Arg
          130            135            140

Glu Val Ser Val Ser Ala Phe Thr Thr His Ser Gln Gly Arg Ala Leu
          145            150            155            160

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1 5 10 15

<210> 195  
 <211> 337  
 <212> PRT  
 <213> Homo sapiens

<400> 195

Thr Arg Pro Cys Phe Pro Gly Cys Gln Cys Glu Val Glu Thr Phe Gly  
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Leu Phe Asp Ser Phe Ser Leu Thr Arg Val Asp Cys Ser Gly Leu Gly  
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Pro His Ile Met Pro Val Pro Ile Pro Leu Asp Thr Ala His Leu Asp  
 35 40 45

Leu Ser Ser Asn Arg Leu Glu Met Val Asn Glu Ser Val Leu Ala Gly  
 50 55 60

Pro Gly Tyr Thr Thr Leu Ala Gly Leu Asp Leu Ser His Asn Leu Leu  
 65 70 75 80

Thr Ser Ile Ser Pro Thr Ala Phe Ser Arg Leu Arg Tyr Leu Glu Ser  
 85 90 95

Leu Asp Leu Ser His Asn Gly Leu Thr Ala Leu Pro Ala Glu Ser Phe  
 100 105 110

Thr Ser Ser Pro Leu Ser Asp Val Asn Leu Ser His Asn Gln Leu Arg  
 115 120 125

Glu Val Ser Val Ser Ala Phe Thr Thr His Ser Gln Gly Arg Ala Leu  
 130 135 140

His Val Asp Leu Ser His Asn Leu Ile His Arg Leu Val Pro His Pro  
 145 150 155 160

Thr Arg Ala Gly Leu Pro Ala Pro Thr Ile Gln Ser Leu Asn Leu Ala  
 165 170 175

Trp Asn Arg Leu His Ala Val Pro Asn Leu Arg Asp Leu Pro Leu Arg  
 180 185 190

Tyr Leu Ser Leu Asp Gly Asn Pro Leu Ala Val Ile Gly Pro Gly Ala  
 195 200 205

Phe Ala Gly Leu Gly Gly Leu Thr His Leu Ser Leu Ala Ser Leu Gln  
 210 215 220

Arg Leu Pro Glu Leu Ala Pro Ser Gly Phe Arg Glu Leu Pro Gly Leu  
 225 230 235 240

Gln Val Leu Asp Leu Ser Gly Asn Pro Lys Leu Asn Trp Ala Gly Ala  
 245 250 255

Glu Val Phe Ser Gly Leu Ser Ser Leu Gln Glu Leu Asp Leu Ser Gly  
 260 265 270

Thr Asn Leu Val Pro Leu Pro Glu Ala Leu Leu Leu His Leu Pro Ala  
 275 280 285

Leu Gln Ser Val Ser Val Gly Gln Asp Val Arg Cys Arg Arg Leu Val  
 290 295 300

Arg Glu Gly Thr Tyr Pro Arg Arg Pro Gly Ser Ser Pro Lys Val Ala  
 305 310 315 320

Leu His Cys Val Asp Thr Arg Glu Ser Ala Ala Arg Gly Pro Thr Ile  
 325 330 335

Leu

<210> 196  
 <211> 200  
 <212> PRT  
 <213> Homo sapiens

<400> 196  
 Thr Arg Pro Cys Phe Pro Gly Cys Gln Cys Glu Val Glu Thr Phe Gly  
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Leu Phe Asp Ser Phe Ser Leu Thr Arg Val Asp Cys Ser Gly Leu Gly  
 20 25 30

Pro His Ile Met Pro Val Pro Ile Pro Leu Asp Thr Ala His Leu Asp  
 35 40 45

Leu Ser Ser Asn Arg Leu Glu Met Val Asn Glu Ser Val Leu Ala Gly  
 50 55 60

Pro Gly Tyr Thr Thr Leu Ala Gly Leu Asp Leu Ser His Asn Leu Leu  
 65 70 75 80

Thr Ser Ile Ser Pro Thr Ala Phe Ser Arg Leu Arg Tyr Leu Glu Ser  
85 90 95

Leu Asp Leu Ser His Asn Gly Leu Thr Ala Leu Pro Ala Glu Ser Phe  
100 105 110

Thr Ser Ser Pro Leu Ser Asp Val Asn Leu Ser His Asn Gln Leu Arg  
115 120 125

Glu Val Ser Val Ser Ala Phe Thr Thr His Ser Gln Gly Arg Ala Leu  
130 135 140

His Val Asp Leu Ser His Asn Leu Ile His Arg Leu Val Pro His Pro  
145 150 155 160

Thr Arg Ala Gly Leu Pro Ala Pro Thr Ile Gln Ser Leu Asn Leu Ala  
165 170 175

Trp Asn Arg Leu His Ala Val Pro Asn Leu Arg Asp Leu Pro Leu Arg  
180 185 190

Tyr Leu Ser Leu Asp Gly Asn Pro  
195 200

<210> 197

<211> 23

<212> PRT

<213> Homo sapiens

<400> 197

Leu Ala Val Ile Gly Pro Gly Ala Phe Ala Gly Leu Gly Gly Leu Thr  
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His Leu Ser Leu Ala Ser Leu  
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<210> 198

<211> 114

<212> PRT

<213> Homo sapiens

<400> 198

Gln Arg Leu Pro Glu Leu Ala Pro Ser Gly Phe Arg Glu Leu Pro Gly  
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Leu Gln Val Leu Asp Leu Ser Gly Asn Pro Lys Leu Asn Trp Ala Gly  
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Ala Glu Val Phe Ser Gly Leu Ser Ser Leu Gln Glu Leu Asp Leu Ser  
 35 40 45

Gly Thr Asn Leu Val Pro Leu Pro Glu Ala Leu Leu Leu His Leu Pro  
 50 55 60

Ala Leu Gln Ser Val Ser Val Gly Gln Asp Val Arg Cys Arg Arg Leu  
 65 70 75 80

Val Arg Glu Gly Thr Tyr Pro Arg Arg Pro Gly Ser Ser Pro Lys Val  
 85 90 95

Ala Leu His Cys Val Asp Thr Arg Glu Ser Ala Ala Arg Gly Pro Thr  
 100 105 110

Ile Leu

<210> 199

<400> 199

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<210> 200

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<210> 201

<211> 3770

<212> DNA

<213> Homo sapiens

<400> 201

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Leu Val Leu Ser Glu Tyr Ala Ser Thr Glu Met Ser Leu His Ala Leu  
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Tyr Met His Gln Leu His Lys Gln Gln Ala Gln Ala Glu Pro Glu Arg  
690 695 700

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acaacgaaag ctgaa 795

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<210> 223

<211> 265

<212> PRT

<213> Homo sapiens

<400> 223

Met Asn Met Ser Val Leu Thr Leu Gln Glu Tyr Glu Phe Glu Lys Gln

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15

Phe Asn Glu Asn Glu Ala Ile Gln Trp Met Gln Glu Asn Trp Lys Lys  
20 25 30  
Ser Phe Leu Phe Ser Ala Leu Tyr Ala Ala Phe Ile Phe Gly Gly Arg  
35 40 45  
His Leu Met Asn Lys Arg Ala Lys Phe Glu Leu Arg Lys Pro Leu Val  
50 55 60  
Leu Trp Ser Leu Thr Leu Ala Val Phe Ser Ile Phe Gly Ala Leu Arg  
65 70 75 80  
Thr Gly Ala Tyr Met Val Tyr Ile Leu Met Thr Lys Gly Leu Lys Gln  
85 90 95  
Ser Val Cys Asp Gln Gly Phe Tyr Asn Gly Pro Val Ser Lys Phe Trp  
100 105 110  
Ala Tyr Ala Phe Val Leu Ser Lys Ala Pro Glu Leu Gly Asp Thr Ile  
115 120 125  
Phe Ile Ile Leu Arg Lys Gln Lys Leu Ile Phe Leu His Trp Tyr His  
130 135 140  
His Ile Thr Val Leu Leu Tyr Ser Trp Tyr Ser Tyr Lys Asp Met Val  
145 150 155 160  
Ala Gly Gly Gly Trp Phe Met Thr Met Asn Tyr Gly Val His Ala Val  
165 170 175  
Met Tyr Ser Tyr Tyr Ala Leu Arg Ala Ala Gly Phe Arg Val Ser Arg  
180 185 190  
Lys Phe Ala Met Phe Ile Thr Leu Ser Gln Ile Thr Gln Met Leu Met  
195 200 205  
Gly Cys Val Val Asn Tyr Leu Val Phe Cys Trp Met Gln His Asp Gln  
210 215 220  
Cys His Ser His Phe Gln Asn Ile Phe Trp Ser Ser Leu Met Tyr Leu  
225 230 235 240  
Ser Tyr Leu Val Leu Phe Cys His Phe Phe Phe Glu Ala Tyr Ile Gly  
245 250 255  
Lys Met Arg Lys Thr Thr Lys Ala Glu  
260 265

<210> 224  
 <211> 46  
 <212> PRT  
 <213> Homo sapiens

<400> 224  
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 Ser Phe Leu Phe Ser Ala Leu Tyr Ala Ala Phe Ile Phe Gly  
 35 40 45

<210> 225  
 <211> 219  
 <212> PRT  
 <213> Homo sapiens

<400> 225  
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 Leu Arg Thr Gly Ala Tyr Met Val Tyr Ile Leu Met Thr Lys Gly Leu  
 35 40 45  
 Lys Gln Ser Val Cys Asp Gln Gly Phe Tyr Asn Gly Pro Val Ser Lys  
 50 55 60  
 Phe Trp Ala Tyr Ala Phe Val Leu Ser Lys Ala Pro Glu Leu Gly Asp  
 65 70 75 80  
 Thr Ile Phe Ile Ile Leu Arg Lys Gln Lys Leu Ile Phe Leu His Trp  
 85 90 95  
 Tyr His His Ile Thr Val Leu Leu Tyr Ser Trp Tyr Ser Tyr Lys Asp  
 100 105 110  
 Met Val Ala Gly Gly Gly Trp Phe Met Thr Met Asn Tyr Gly Val His  
 115 120 125  
 Ala Val Met Tyr Ser Tyr Tyr Ala Leu Arg Ala Ala Gly Phe Arg Val

130	135	140
Ser Arg Lys Phe Ala Met Phe Ile Thr Leu Ser Gln Ile Thr Gln Met		
145	150	155 160
Leu Met Gly Cys Val Val Asn Tyr Leu Val Phe Cys Trp Met Gln His		
	165	170 175
Asp Gln Cys His Ser His Phe Gln Asn Ile Phe Trp Ser Ser Leu Met		
	180	185 190
Tyr Leu Ser Tyr Leu Val Leu Phe Cys His Phe Phe Phe Glu Ala Tyr		
	195	200 205
Ile Gly Lys Met Arg Lys Thr Thr Lys Ala Glu		
210	215	

<210> 226

<211> 16

<212> PRT

<213> Homo sapiens

<400> 226

Gly Arg His Leu Met Asn Lys Arg Ala Lys Phe Glu Leu Arg Lys Pro
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<210> 227

<211> 17

<212> PRT

<213> Homo sapiens

<400> 227

Leu Val Leu Trp Ser Leu Thr Leu Ala Val Phe Ser Ile Phe Gly Ala
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Leu

<210> 228

<211> 57

<212> PRT

<213> Homo sapiens

<400> 228

Arg Thr Gly Ala Tyr Met Val Tyr Ile Leu Met Thr Lys Gly Leu Lys

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                     20                      25                      30  
 Trp Ala Tyr Ala Phe Val Leu Ser Lys Ala Pro Glu Leu Gly Asp Thr  
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 Ile Phe Ile Ile Leu Arg Lys Gln Lys  
                     50                      55

<210> 229  
 <211> 17  
 <212> PRT  
 <213> Homo sapiens

<400> 229  
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Trp

<210> 230  
 <211> 11  
 <212> PRT  
 <213> Homo sapiens

<400> 230  
 Tyr Ser Tyr Lys Asp Met Val Ala Gly Gly Gly  
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<210> 231  
 <211> 19  
 <212> PRT  
 <213> Homo sapiens

<400> 231  
 Trp Phe Met Thr Met Asn Tyr Gly Val His Ala Val Met Tyr Ser Tyr  
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Tyr Ala Leu

<210> 232

<211> 10

<212> PRT

<213> Homo sapiens

<400> 232

Arg Ala Ala Gly Phe Arg Val Ser Arg Lys  
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<210> 233

<211> 24

<212> PRT

<213> Homo sapiens

<400> 233

Phe Ala Met Phe Ile Thr Leu Ser Gln Ile Thr Gln Met Leu Met Gly  
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Cys Val Val Asn Tyr Leu Val Phe  
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<210> 234

<211> 14

<212> PRT

<213> Homo sapiens

<400> 234

Cys Trp Met Gln His Asp Gln Cys His Ser His Phe Gln Asn  
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<210> 235

<211> 20

<212> PRT

<213> Homo sapiens

<400> 235

Ile Phe Trp Ser Ser Leu Met Tyr Leu Ser Tyr Leu Val Leu Phe Cys  
1 5 10 15

His Phe Phe Phe  
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<210> 236

<211> 14

<212> PRT  
<213> Homo sapiens

<400> 236  
Glu Ala Tyr Ile Gly Lys Met Arg Lys Thr Thr Lys Ala Glu  
1 5 10

<210> 237  
<400> 237  
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<211> 813  
<212> DNA  
<213> Homo sapiens

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caaaccgtgt gctttgccat ctacacggat gacgccgtag tcagattctg gtcctttctc 360  
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atgggtcatca ccagcctgca gattctgcag atgggttctgg gcaccatctt tggcatactg 660  
aattacatct ggaggcagga gaaaggatgc cacacaacaa cggaacactt cttctggtct 720  
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<210> 239  
<211> 265  
<212> PRT  
<213> Mus sp.

<400> 239  
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Phe Asn Glu Asn Glu Ala Ile Gln Trp Met Gln Glu Asn Trp Lys Lys  
20 25 30

Ser Phe Leu Phe Ser Ala Leu Tyr Ala Ala Phe Ile Phe Gly Gly Arg





<210> 241  
 <211> 2032  
 <212> DNA  
 <213> Mus sp.

<400> 241

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 <212> DNA  
 <213> Mus sp.

<400> 242

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aaacagaaac tgatcttcct gcactgggtac caccacatca ctgtgctcct gtactcctgg 180  
tactcctaca aagacatggg cgctgggggt ggttggttca tgactatgaa ctatggcgtg 240  
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<210> 243

<211> 174

<212> PRT

<213> Mus sp.

<400> 243

Leu Lys Gln Ser Val Cys Asp Gln Ser Phe Tyr Asn Gly Pro Val Ser  
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20 25 30  
Asp Thr Ile Phe Ile Ile Leu Arg Lys Gln Lys Leu Ile Phe Leu His  
35 40 45  
Trp Tyr His His Ile Thr Val Leu Leu Tyr Ser Trp Tyr Ser Tyr Lys  
50 55 60  
Asp Met Val Ala Gly Gly Gly Trp Phe Met Thr Met Asn Tyr Gly Val  
65 70 75 80  
His Ala Val Met Tyr Ser Tyr Tyr Ala Leu Arg Ala Ala Gly Phe Arg  
85 90 95  
Val Ser Arg Lys Phe Ala Met Phe Ile Thr Leu Ser Gln Ile Thr Gln  
100 105 110  
Met Leu Met Gly Cys Val Ile Asn Tyr Leu Val Phe Asn Trp Met Gln  
115 120 125  
His Asp Asn Asp Gln Cys Tyr Ser His Phe Gln Asn Ile Phe Trp Ser  
130 135 140  
Ser Leu Met Tyr Leu Ser Tyr Leu Val Leu Phe Cys His Phe Phe Phe  
145 150 155 160

Glu Ala Tyr Ile Gly Lys Val Lys Lys Ala Thr Lys Ala Glu  
 165 170

<210> 244  
 <211> 49  
 <212> PRT  
 <213> Mus sp.

<400> 244  
 Leu Lys Gln Ser Val Cys Asp Gln Ser Phe Tyr Asn Gly Pro Val Ser  
 1 5 10 15

Lys Phe Trp Ala Tyr Ala Phe Val Leu Ser Lys Ala Pro Glu Leu Gly  
 20 25 30

Asp Thr Ile Phe Ile Ile Leu Arg Lys Gln Lys Leu Ile Phe Leu His  
 35 40 45

Trp

<210> 245  
 <211> 17  
 <212> PRT  
 <213> Mus sp.

<400> 245  
 Tyr His His Ile Thr Val Leu Leu Tyr Ser Trp Tyr Ser Tyr Lys Asp  
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Met

<210> 246  
 <211> 11  
 <212> PRT  
 <213> Mus sp.

<400> 246  
 Val Ala Gly Gly Gly Trp Phe Met Thr Met Asn  
 1 5 10

<210> 247

<211> 19  
<212> PRT  
<213> Mus sp.

<400> 247  
Tyr Gly Val His Ala Val Met Tyr Ser Tyr Tyr Ala Leu Arg Ala Ala  
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Gly Phe Arg

<210> 248  
<211> 10  
<212> PRT  
<213> Mus sp.

<400> 248  
Val Ser Arg Lys Phe Ala Met Phe Ile Thr  
1 5 10

<210> 249  
<211> 24  
<212> PRT  
<213> Mus sp.

<400> 249  
Leu Ser Gln Ile Thr Gln Met Leu Met Gly Cys Val Ile Asn Tyr Leu  
1 5 10 15  
Val Phe Asn Trp Met Gln His Asp  
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<210> 250  
<211> 16  
<212> PRT  
<213> Mus sp.

<400> 250  
Asn Asp Gln Cys Tyr Ser His Phe Gln Asn Ile Phe Trp Ser Ser Leu  
1 5 10 15

<210> 251  
<211> 974  
<212> DNA

<213> Rattus sp.

<400> 251

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aatgaccagt gctactccca ctttcagaac atcttctggg cctcactcat gtacctcagc 360  
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tatgatcctt tttgggtgag gactcactga gaacactgct gctgagggac ccccttcct 660  
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ggacagcaag caaaacactg caggaagagg ggggagatct attcagagtt ttttgttttg 780  
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cccacgcgca tgcagacaca cccacctaca cactatctgc agatgaccag tgtcctatgc 900  
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aaaaaaaaaa aaaa 974

<210> 252

<211> 432

<212> DNA

<213> Rattus sp.

<400> 252

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ggttgggttca tgactatgaa ctatggcgta cacgccgtca tgtactctta ctacgccttg 180  
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aatgaccagt gctactccca ctttcagaac atcttctggg cctcactcat gtacctcagc 360  
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<210> 253

<211> 144

<212> PRT

<213> Rattus sp.

<400> 253

Leu Gly Asp Thr Ile Phe Ile Ile Leu Arg Lys Gln Lys Leu Ile Phe  
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Leu His Trp Tyr His His Ile Thr Val Leu Leu Tyr Ser Trp Tyr Ser



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<212> DNA  
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tgagccgcac aagtcctcag tactcagcac cacaccgcca gacgcaccca gcccgcaagg 1560

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<213> Homo sapiens

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Asn Cys Pro Tyr Lys Cys Ile Cys Ala Ala Asp Leu Leu Ser Cys Thr  
 35 40 45

Gly Leu Gly Leu Gln Asp Val Pro Ala Glu Leu Pro Ala Ala Thr Ala  
 50 55 60

Asp Leu Asp Leu Ser His Asn Ala Leu Gln Arg Leu Arg Pro Gly Trp  
 65 70 75 80

Leu Ala Pro Leu Phe Gln Leu Arg Ala Leu His Leu Asp His Asn Glu  
 85 90 95

Leu Asp Ala Leu Gly Arg Gly Val Phe Val Asn Ala Ser Gly Leu Arg  
 100 105 110

Leu Leu Asp Leu Ser Ser Asn Thr Leu Arg Ala Leu Gly Arg His Asp  
 115 120 125

Leu Asp Gly Leu Gly Ala Leu Glu Lys Leu Leu Leu Phe Asn Asn Arg  
 130 135 140

Leu Val His Leu Asp Glu His Ala Phe His Gly Leu Arg Ala Leu Ser  
 145 150 155 160

His Leu Tyr Leu Gly Cys Asn Glu Leu Ala Ser Phe Ser Phe Asp His  
 165 170 175

Leu His Gly Leu Ser Ala Thr His Leu Leu Thr Leu Asp Leu Ser Ser



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 Gln Asp Val Pro Ala Glu Leu Pro Ala Ala Thr Ala Asp Leu Asp Leu  
 35                      40                      45  
  
 Ser His Asn Ala Leu Gln Arg Leu Arg Pro Gly Trp Leu Ala Pro Leu  
 50                      55                      60  
  
 Phe Gln Leu Arg Ala Leu His Leu Asp His Asn Glu Leu Asp Ala Leu  
 65                      70                      75                      80  
  
 Gly Arg Gly Val Phe Val Asn Ala Ser Gly Leu Arg Leu Leu Asp Leu  
 85                      90                      95  
  
 Ser Ser Asn Thr Leu Arg Ala Leu Gly Arg His Asp Leu Asp Gly Leu  
 100                      105                      110  
  
 Gly Ala Leu Glu Lys Leu Leu Leu Phe Asn Asn Arg Leu Val His Leu  
 115                      120                      125



Pro Pro Cys Arg Cys Cys Arg Arg Ala Cys Pro Leu Pro Pro Leu Ala  
385 390 395 400

Pro Asn Thr Gln Pro Ala Pro Arg Ala Glu Pro His Lys Ser Ser Val  
405 410 415

Leu Ser Thr Thr Pro Pro Asp Ala Pro Ser Pro Gln Gly Gln Ala Ser  
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Thr Ser Thr  
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<210> 276

<211> 363

<212> PRT

<213> Homo sapiens

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Lys Cys Ile Cys Ala Ala Asp Leu Leu Ser Cys Thr Gly Leu Gly Leu  
20 25 30

Gln Asp Val Pro Ala Glu Leu Pro Ala Ala Thr Ala Asp Leu Asp Leu  
35 40 45

Ser His Asn Ala Leu Gln Arg Leu Arg Pro Gly Trp Leu Ala Pro Leu  
50 55 60

Phe Gln Leu Arg Ala Leu His Leu Asp His Asn Glu Leu Asp Ala Leu  
65 70 75 80

Gly Arg Gly Val Phe Val Asn Ala Ser Gly Leu Arg Leu Leu Asp Leu  
85 90 95

Ser Ser Asn Thr Leu Arg Ala Leu Gly Arg His Asp Leu Asp Gly Leu  
100 105 110

Gly Ala Leu Glu Lys Leu Leu Leu Phe Asn Asn Arg Leu Val His Leu  
115 120 125

Asp Glu His Ala Phe His Gly Leu Arg Ala Leu Ser His Leu Tyr Leu  
130 135 140

Gly Cys Asn Glu Leu Ala Ser Phe Ser Phe Asp His Leu His Gly Leu





Gly Phe Thr Thr Leu Leu Gly Cys Ala Val Gly Leu Val Leu Val Leu  
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Leu Tyr Leu Phe  
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Val Leu Ser Thr Thr Pro Pro Asp Ala Pro Ser Pro Gln Gly Gln Ala  
 35 40 45

Ser Thr Ser Thr  
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Ile Ala Phe Phe Asn Phe Ala Gly Ile Ser Val Thr Lys Glu Leu Ser  
 275 280 285

Ala Thr Thr Arg Met Val Leu Asp Ser Leu Arg Thr Val Val Ile Trp  
 290 295 300

Ala Leu Ser Leu Ala Leu Gly Trp Glu Ala Phe His Ala Leu Gln Ile  
 305 310 315 320

Leu Gly Phe Leu Ile Leu Leu Ile Gly Thr Ala Leu Tyr Asn Gly Leu  
 325 330 335

His Arg Pro Leu Leu Gly Arg Leu Ser Arg Gly Arg Pro Leu Ala Glu  
 340 345 350

Glu Ser Glu Gln Glu Arg Leu Leu Gly Gly Thr Arg Thr Pro Ile Asn  
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Asp Ala Ser  
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<211> 18

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<213> Homo sapiens

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Met Ala Trp Thr Lys Tyr Gln Leu Phe Leu Ala Gly Leu Met Leu Val  
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Thr Gly

<210> 283

<211> 353

<212> PRT

<213> Homo sapiens

<400> 283

Ser Ile Asn Thr Leu Ser Ala Lys Trp Ala Asp Asn Phe Met Ala Glu  
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Gly Cys Gly Gly Ser Lys Glu His Ser Phe Gln His Pro Phe Leu Gln  
 20 25 30

Ala Val Gly Met Phe Leu Gly Glu Phe Ser Cys Leu Ala Ala Phe Tyr



290

295

300

Phe Leu Ile Leu Leu Ile Gly Thr Ala Leu Tyr Asn Gly Leu His Arg  
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Pro Leu Leu Gly Arg Leu Ser Arg Gly Arg Pro Leu Ala Glu Glu Ser  
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Glu Gln Glu Arg Leu Leu Gly Gly Thr Arg Thr Pro Ile Asn Asp Ala  
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Ser

<210> 284

<211> 29

<212> PRT

<213> Homo sapiens

<400> 284

Ser Ile Asn Thr Leu Ser Ala Lys Trp Ala Asp Asn Phe Met Ala Glu  
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Gly Cys Gly Gly Ser Lys Glu His Ser Phe Gln His Pro  
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<212> PRT

<213> Homo sapiens

<400> 285

Asn Met Thr Ser Ala Ser Ser Phe Gln  
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<211> 14

<212> PRT

<213> Homo sapiens

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Asp Leu Leu Ser Lys His Asp Ser Gln His Lys Leu Ser Glu  
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<210> 287  
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<400> 287  
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Ala Phe Tyr Leu Leu  
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<211> 19  
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<400> 291  
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Phe Leu Gly

<210> 292  
<211> 17  
<212> PRT  
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<400> 292  
Trp Leu Gly Ile Leu Ala Thr Ile Ala Gly Leu Val Val Val Gly Leu  
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<212> PRT  
<213> Homo sapiens

<400> 293  
Val Ile Thr Gly Asp Leu Leu Ile Ile Met Ala Gln Ile Ile Val Ala  
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<212> PRT  
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<400> 294  
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Tyr Ile

<210> 295

<211> 23

<212> PRT

<213> Homo sapiens

<400> 295

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Asn Phe Ala Gly Ile Ser Val  
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<210> 296

<211> 20

<212> PRT

<213> Homo sapiens

<400> 296

Met Val Leu Asp Ser Leu Arg Thr Val Val Ile Trp Ala Leu Ser Leu  
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Ala Leu Gly Trp  
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<210> 297

<211> 17

<212> PRT

<213> Homo sapiens

<400> 297

Ile Leu Gly Phe Leu Ile Leu Leu Ile Gly Thr Ala Leu Tyr Asn Gly  
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Leu

<210> 298

<211> 20

<212> PRT

<213> Homo sapiens

<400> 298

Arg Cys Arg Ala Ala Gly Gln Ser Asp Ser Ser Val Asp Pro Gln Gln  
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Pro Phe Asn Pro  
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<210> 299

<211> 7

<212> PRT

<213> Homo sapiens

<400> 299

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<210> 300

<211> 24

<212> PRT

<213> Homo sapiens

<400> 300

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<211> 9

<212> PRT

<213> Homo sapiens

<400> 301

Thr Lys Glu Leu Ser Ala Thr Thr Arg  
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<210> 302

<211> 35

<212> PRT

<213> Homo sapiens

<400> 302

His Arg Pro Leu Leu Gly Arg Leu Ser Arg Gly Arg Pro Leu Ala Glu  
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 <212> DNA  
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<400> 303

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CCCTGCTGCT

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 <212> DNA  
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<210> 305  
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 <212> PRT  
 <213> Homo sapiens

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Val Ser Ser Gly Glu Leu Ala Thr Val Val Arg Arg Phe Ser Gln Thr

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Met Ala Pro His Trp Ala Val Trp Leu Leu Ala Ala Arg Leu Trp Gly  
 1 5 10 15

Leu Gly Ile Gly  
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<210> 307

<211> 223

<212> PRT

<213> Homo sapiens

<400> 307

Ala Glu Val Trp Trp Asn Leu Val Pro Arg Lys Thr Val Ser Ser Gly  
 1 5 10 15

Glu Leu Ala Thr Val Val Arg Arg Phe Ser Gln Thr Gly Ile Gln Asp  
 20 25 30

Phe Leu Thr Leu Thr Leu Thr Glu Pro Thr Gly Leu Leu Tyr Val Gly  
 35 40 45

Ala Arg Glu Ala Leu Phe Ala Phe Ser Met Glu Ala Leu Glu Leu Gln  
 50 55 60

Gly Ala Ile Ser Trp Glu Ala Pro Val Glu Lys Lys Thr Glu Cys Ile  
 65 70 75 80

Gln Lys Gly Lys Asn Asn Gln Thr Glu Cys Phe Asn Phe Ile Arg Phe  
 85 90 95

Leu Gln Pro Tyr Asn Ala Ser His Leu Tyr Val Cys Gly Thr Tyr Ala  
 100 105 110

Phe Gln Pro Lys Cys Thr Tyr Val Val Ser Ala Ala Leu Leu Pro Arg  
 115 120 125

Cys Pro Gln Pro Pro Ala Leu Leu Thr Leu Leu Trp Thr Arg Gly Cys  
 130 135 140

Gly Pro Gln Ser Pro Ala Leu Lys His Leu Leu Ile Thr Ser Leu Ser  
 145 150 155 160

Val Leu Arg Thr Cys Ser Pro Ser Leu Trp Ser Met Glu Ser Leu Lys  
 165 170 175

Met Gly Arg Ala Ser Val Pro Met Thr Gln Leu Arg Ala Met Leu Ala  
 180 185 190

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Phe Leu Trp Met Val Ser Cys Thr Arg Pro His Ser Thr Thr Ser Trp  
 195 200 205

Ala Arg Asn Pro Leu Ser Cys Val Thr Trp Gly Pro Thr Thr Pro  
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<210> 308

<211> 2498

<212> DNA

<213> Homo sapiens

<400> 308

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<211> 678

<212> DNA

<213> Homo sapiens

<400> 309

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<210> 310

<211> 226

<212> PRT

<213> Homo sapiens

<400> 310

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      20             25             30

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Glu Glu Val Phe Thr Ser Lys Glu Glu Ala Asn Phe Phe Ile His Arg
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Arg Leu Leu Tyr Asn Arg Phe Asp Leu Glu Leu Phe Thr Pro Gly Asn
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[illegible]

<213> Homo sapiens

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35 40 45

Glu Arg Glu Cys Asn Glu Glu Leu Cys Asn Tyr Glu Glu Ala Arg Glu  
50 55 60

Ile	Phe	Val	Asp	Glu	Asp	Lys	Thr	Ile	Ala	Phe	Trp	Gln	Glu	Tyr	Ser
65					70					75					80

Ala Lys Gly Pro Thr Thr Lys Ser Asp Gly Asn Arg Glu Lys Ile Asp  
85 90 95

Val	Met	Gly	Leu	Leu	Thr	Gly	Leu	Ile	Ala	Ala	Gly	Val	Phe	Leu	Val
			100					105					110		

Ile Phe Gly Leu Leu Gly Tyr Tyr Leu Cys Ile Thr Lys Cys Asn Arg  
115 120 125

Leu Gln His Pro Cys Ser Ser Ala Val Tyr Glu Arg Gly Arg His Thr  
130 135 140

Pro Ser Ile Ile Phe Arg Arg Pro Glu Glu Ala Ala Leu Ser Pro Leu  
145 150 155 160

Pro Pro Ser Val Glu Asp Ala Gly Leu Pro Ser Tyr Glu Gln Ala Val  
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Ala Leu Thr Arg Lys His Ser Val Ser Pro Pro Pro Pro Tyr Pro Gly  
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 <212> PRT  
 <213> Homo sapiens

<400> 313  
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 35 40 45  
 Glu Arg Glu Cys Asn Glu Glu Leu Cys Asn Tyr Glu Glu Ala Arg Glu  
 50 55 60  
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			20					25					30		
Glu	Ala	Ala	Leu	Ser	Pro	Leu	Pro	Pro	Ser	Val	Glu	Asp	Ala	Gly	Leu
		35					40					45			
Pro	Ser	Tyr	Glu	Gln	Ala	Val	Ala	Leu	Thr	Arg	Lys	His	Ser	Val	Ser
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Pro	Pro	Pro	Pro	Tyr	Pro	Gly	His	Thr	Lys	Gly	Phe	Arg	Val	Phe	Lys
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Lys	Ser	Met	Ser	Leu	Pro	Ser	His								
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<400> 325





<210> 327

<211> 24

<212> PRT

<213> Homo sapiens

<400> 327

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<210> 328

<211> 329

<212> PRT

<213> Homo sapiens

<400> 328

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20 25 30

Asn Thr Ala Trp Glu Glu Lys Thr Leu Ser Lys Tyr Glu Ser Ser Glu  
35 40 45

Ile Arg Leu Leu Glu Ile Leu Glu Gly Leu Cys Glu Ser Ser Asp Phe  
50 55 60

Glu Cys Asn Gln Met Leu Glu Ala Gln Glu Glu His Leu Glu Ala Trp  
65 70 75 80

Trp Leu Gln Leu Lys Ser Glu Tyr Pro Asp Leu Phe Glu Trp Phe Cys  
85 90 95

Val Lys Thr Leu Lys Val Cys Cys Ser Pro Gly Thr Tyr Gly Pro Asp  
100 105 110

Cys Leu Ala Cys Gln Gly Gly Ser Gln Arg Pro Cys Ser Gly Asn Gly  
115 120 125

His Cys Ser Gly Asp Gly Ser Arg Gln Gly Asp Gly Ser Cys Arg Cys  
130 135 140

His Met Gly Tyr Gln Gly Pro Leu Cys Thr Asp Cys Met Asp Gly Tyr  
145 150 155 160



Phe Ser Ser Leu Arg Asn Glu Thr His Ser Ile Cys Thr Ala Cys Asp  
165 170 175

Glu Ser Cys Lys Thr Cys Ser Gly Leu Thr Asn Arg Asp Cys Gly Glu  
180 185 190

Cys Glu Val Gly Trp Val Leu Asp Glu Gly Ala Cys Val Asp Val Asp  
195 200 205

Glu Cys Ala Ala Glu Pro Pro Pro Cys Ser Ala Ala Gln Phe Cys Lys  
210 215 220

Asn Ala Asn Gly Ser Tyr Thr Cys Glu Glu Cys Asp Ser Ser Cys Val  
225 230 235 240

Gly Cys Thr Gly Glu Gly Pro Gly Asn Cys Lys Glu Cys Ile Ser Gly  
245 250 255

Tyr Ala Arg Glu His Gly Gln Cys Ala Asp Val Asp Glu Cys Ser Leu  
260 265 270

Ala Glu Lys Thr Cys Val Arg Lys Asn Glu Asn Cys Tyr Asn Thr Pro  
275 280 285

Gly Ser Tyr Val Cys Val Cys Pro Asp Gly Phe Glu Glu Thr Glu Asp  
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Ala Cys Val Pro Pro Ala Glu Ala Glu Ala Thr Glu Gly Glu Ser Pro  
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<210> 329

<211> 2730

<212> DNA

<213> Homo sapiens

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<210> 330

<211> 2013

<212> DNA

<213> Homo sapiens

<400> 330

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<212> PRT

<213> Homo sapiens

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20

25

30

Arg Ala Phe Arg Val Arg Ile Ala Gly Asp Ala Pro Leu Gln Gly Val

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50	55	60
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Phe Leu Ser Arg Gly Arg Glu Ala Glu Val Leu Val Ala Arg Gly Val		
	85	90
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	100	105
Tyr Pro Ala Ser Leu Thr Asp Val Ser Leu Ala Leu Ser Glu Leu Arg		
	115	120
Pro Asn Asp Ser Gly Ile Tyr Arg Cys Glu Val Gln His Gly Ile Asp		
	130	135
Asp Ser Ser Asp Ala Val Glu Val Lys Val Lys Gly Val Val Phe Leu		
145	150	155
Tyr Arg Glu Gly Ser Ala Arg Tyr Ala Phe Ser Phe Ser Gly Ala Gln		
	165	170
Glu Ala Cys Ala Arg Ile Gly Ala His Ile Ala Thr Pro Glu Gln Leu		
	180	185
Tyr Ala Ala Tyr Leu Gly Gly Tyr Glu Gln Cys Asp Ala Gly Trp Leu		
	195	200
Ser Asp Gln Thr Val Arg Tyr Pro Ile Gln Thr Pro Arg Glu Ala Cys		
	210	215
Tyr Gly Asp Met Asp Gly Phe Pro Gly Val Arg Asn Tyr Gly Val Val		
225	230	235
Asp Pro Asp Asp Leu Tyr Asp Val Tyr Cys Tyr Ala Glu Asp Leu Asn		
	245	250
Gly Glu Leu Phe Leu Gly Asp Pro Pro Glu Lys Leu Thr Leu Glu Glu		
	260	265
Ala Arg Ala Tyr Cys Gln Glu Arg Gly Ala Glu Ile Ala Thr Thr Gly		
	275	280
Gln Leu Tyr Ala Ala Trp Asp Gly Gly Leu Asp His Cys Ser Pro Gly		

290		295		300
Trp Leu Ala Asp Gly Ser Val Arg Tyr Pro Ile Val Thr Pro Ser Gln				
305		310		315 320
Arg Cys Gly Gly Gly Leu Pro Gly Val Lys Thr Leu Phe Leu Phe Pro				
	325		330	335
Asn Gln Thr Gly Phe Pro Asn Lys His Ser Arg Phe Asn Val Tyr Cys				
	340		345	350
Phe Arg Asp Ser Ala Gln Pro Ser Ala Ile Pro Glu Ala Ser Asn Pro				
	355		360	365
Ala Ser Asn Pro Ala Ser Asp Gly Leu Glu Ala Ile Val Thr Val Thr				
	370		375	380
Glu Thr Leu Glu Glu Leu Gln Leu Pro Gln Glu Ala Thr Glu Ser Glu				
385		390		395 400
Ser Arg Gly Ala Ile Tyr Ser Ile Pro Ile Met Glu Asp Gly Gly Gly				
	405		410	415
Gly Ser Ser Thr Pro Glu Asp Pro Ala Glu Ala Pro Arg Thr Leu Leu				
	420		425	430
Glu Phe Glu Thr Gln Ser Met Val Pro Pro Thr Gly Phe Ser Glu Glu				
	435		440	445
Glu Gly Lys Ala Leu Glu Glu Glu Glu Lys Tyr Glu Asp Glu Glu Glu				
	450		455	460
Lys Glu Glu Glu Glu Glu Glu Glu Glu Val Glu Asp Glu Ala Leu Trp				
465		470		475 480
Ala Trp Pro Ser Glu Leu Ser Ser Pro Gly Pro Glu Ala Ser Leu Pro				
	485		490	495
Thr Glu Pro Ala Ala Gln Glu Lys Ser Leu Ser Gln Ala Pro Ala Arg				
	500		505	510
Ala Val Leu Gln Pro Gly Ala Ser Pro Leu Pro Asp Gly Glu Ser Glu				
	515		520	525
Ala Ser Arg Pro Pro Arg Val His Gly Pro Pro Thr Glu Thr Leu Pro				
	530		535	540
Thr Pro Arg Glu Arg Asn Leu Ala Ser Pro Ser Pro Ser Thr Leu Val				

545                      550                      555                      560  
 Glu Ala Arg Glu Val Gly Glu Ala Thr Gly Gly Pro Glu Leu Ser Gly  
                          565                      570                      575  
 Val Pro Arg Gly Glu Ser Glu Glu Thr Gly Ser Ser Glu Gly Ala Pro  
                          580                      585                      590  
 Ser Leu Leu Pro Ala Thr Arg Ala Pro Glu Gly Thr Arg Glu Leu Glu  
                          595                      600                      605  
 Ala Pro Ser Glu Asp Asn Ser Gly Arg Thr Ala Pro Ala Gly Thr Ser  
                          610                      615                      620  
 Val Gln Ala Gln Pro Val Leu Pro Thr Asp Ser Ala Ser Arg Gly Gly  
 625                      630                      635                      640  
 Val Ala Val Val Pro Ala Ser Gly Asn Ser Ala Gln Gly Ser Thr Ala  
                          645                      650                      655  
 Leu Ser Ile Leu Leu Leu Phe Phe Pro Leu Gln Leu Trp Val Thr  
                          660                      665                      670

<210> 332

<211> 22

<212> PRT

<213> Homo sapiens

<400> 332

Met Ala Gln Leu Phe Leu Pro Leu Leu Ala Ala Leu Val Leu Ala Gln  
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Ala Pro Ala Ala Leu Ala  
                          20

<210> 333

<211> 649

<212> PRT

<213> Homo sapiens

<400> 333

Asp Val Leu Glu Gly Asp Ser Ser Glu Asp Arg Ala Phe Arg Val Arg  
   1                      5                      10                      15

Ile Ala Gly Asp Ala Pro Leu Gln Gly Val Leu Gly Gly Ala Leu Thr  
                          20                      25                      30







Glu Ala Thr Gly Gly Pro Glu Leu Ser Gly Val Pro Arg Gly Glu Ser  
545 550 555 560

Glu Glu Thr Gly Ser Ser Glu Gly Ala Pro Ser Leu Leu Pro Ala Thr  
565 570 575

Arg Ala Pro Glu Gly Thr Arg Glu Leu Glu Ala Pro Ser Glu Asp Asn  
580 585 590

Ser Gly Arg Thr Ala Pro Ala Gly Thr Ser Val Gln Ala Gln Pro Val  
595 600 605

Leu Pro Thr Asp Ser Ala Ser Arg Gly Gly Val Ala Val Val Pro Ala  
610 615 620

Ser Gly Asn Ser Ala Gln Gly Ser Thr Ala Leu Ser Ile Leu Leu Leu  
625 630 635 640

Phe Phe Pro Leu Gln Leu Trp Val Thr  
645

<210> 334

<211> 456

<212> PRT

<213> Pigeon pea witches'-broom phytoplasma

<400> 334

Met Asn Leu Asp Ile His Cys Glu Gln Leu Ser Asp Ala Arg Trp Thr  
1 5 10 15

Glu Leu Leu Pro Leu Leu Gln Gln Tyr Glu Val Val Arg Leu Asp Asp  
20 25 30

Cys Gly Leu Thr Glu Glu His Cys Lys Asp Ile Gly Ser Ala Leu Arg  
35 40 45

Ala Asn Pro Ser Leu Thr Glu Leu Cys Leu Arg Thr Asn Glu Leu Gly  
50 55 60

Asp Ala Gly Val His Leu Val Leu Gln Gly Leu Gln Ser Pro Thr Cys  
65 70 75 80

Lys Ile Gln Lys Leu Ser Leu Gln Asn Cys Ser Leu Thr Glu Ala Gly  
85 90 95

Cys Gly Val Leu Pro Ser Thr Leu Arg Ser Leu Pro Thr Leu Arg Glu

Leu His Leu Ser Asp Asn Pro Leu Gly Asp Ala Gly Leu Arg Leu Leu  
 115 120 125  
 Cys Glu Gly Leu Leu Asp Pro Gln Cys His Leu Glu Lys Leu Gln Leu  
 130 135 140  
 Glu Tyr Cys Arg Leu Thr Ala Ala Ser Cys Glu Pro Leu Ala Ser Val  
 145 150 155 160  
 Leu Arg Ala Thr Arg Ala Leu Lys Glu Leu Thr Val Ser Asn Asn Asp  
 165 170 175  
 Ile Gly Glu Ala Gly Ala Arg Val Leu Gly Gln Gly Leu Ala Asp Ser  
 180 185 190  
 Ala Cys Gln Leu Glu Thr Leu Arg Leu Glu Asn Cys Gly Leu Thr Pro  
 195 200 205  
 Ala Asn Cys Lys Asp Leu Cys Gly Ile Val Ala Ser Gln Ala Ser Leu  
 210 215 220  
 Arg Glu Leu Asp Leu Gly Ser Asn Gly Leu Gly Asp Ala Gly Ile Ala  
 225 230 235 240  
 Glu Leu Cys Pro Gly Leu Leu Ser Pro Ala Ser Arg Leu Lys Thr Leu  
 245 250 255  
 Trp Leu Trp Glu Cys Asp Ile Thr Ala Ser Gly Cys Arg Asp Leu Cys  
 260 265 270  
 Arg Val Leu Gln Ala Lys Glu Thr Leu Lys Glu Leu Ser Leu Ala Gly  
 275 280 285  
 Asn Lys Leu Gly Asp Glu Gly Ala Arg Leu Leu Cys Glu Ser Leu Leu  
 290 295 300  
 Gln Pro Gly Cys Gln Leu Glu Ser Leu Trp Val Lys Ser Cys Ser Leu  
 305 310 315 320  
 Thr Ala Ala Cys Cys Gln His Val Ser Leu Met Leu Thr Gln Asn Lys  
 325 330 335  
 His Leu Leu Glu Leu Gln Leu Ser Ser Asn Lys Leu Gly Asp Ser Gly  
 340 345 350  
 Ile Gln Glu Leu Cys Gln Ala Leu Ser Gln Pro Gly Thr Thr Leu Arg



Phe	Ile	Arg	Phe	Leu	Gln	Pro	Tyr	Asn	Ser	Ser	His	Leu	Tyr	Val	Cys	115	120	125
Gly	Thr	Tyr	Ala	Phe	Gln	Pro	Lys	Cys	Thr	Tyr	Ile	Asn	Met	Leu	Thr	130	135	140
Phe	Thr	Leu	Asp	Arg	Ala	Glu	Phe	Glu	Asp	Gly	Lys	Gly	Lys	Cys	Pro	145	150	155
Tyr	Asp	Pro	Ala	Lys	Gly	His	Thr	Gly	Leu	Leu	Val	Asp	Gly	Glu	Leu	165	170	175
Tyr	Ser	Ala	Thr	Leu	Asn	Asn	Phe	Leu	Gly	Thr	Glu	Pro	Val	Ile	Leu	180	185	190
Arg	Tyr	Met	Gly	Thr	His	His	Ser	Ile	Lys	Thr	Glu	Tyr	Leu	Ala	Phe	195	200	205
Trp	Leu	Asn	Glu	Pro	His	Phe	Val	Gly	Ser	Ala	Phe	Val	Pro	Glu	Ser	210	215	220
Val	Gly	Ser	Phe	Thr	Gly	Asp	Asp	Asp	Lys	Ile	Tyr	Phe	Phe	Phe	Ser	225	230	235
Glu	Arg	Ala	Val	Glu	Tyr	Asp	Cys	Tyr	Ser	Glu	Gln	Val	Val	Ala	Arg	245	250	255
Val	Ala	Arg	Val	Cys	Lys	Gly	Asp	Met	Gly	Gly	Ala	Arg	Thr	Leu	Gln	260	265	270
Lys	Lys	Trp	Thr	Thr	Phe	Leu	Lys	Ala	Arg	Leu	Val	Cys	Ser	Ala	Pro	275	280	285
Asp	Trp	Lys	Val	Tyr	Phe	Asn	Gln	Leu	Lys	Ala	Val	His	Thr	Leu	Arg	290	295	300
Gly	Ala	Ser	Trp	His	Asn	Thr	Thr	Phe	Phe	Gly	Val	Phe	Gln	Ala	Arg	305	310	315
Trp	Gly	Asp	Met	Asp	Leu	Ser	Ala	Val	Cys	Glu	Tyr	Gln	Leu	Glu	Gln	325	330	335
Ile	Gln	Gln	Val	Phe	Glu	Gly	Pro	Tyr	Lys	Glu	Tyr	Ser	Glu	Gln	Ala	340	345	350
Gln	Lys	Trp	Ala	Arg	Tyr	Thr	Asp	Pro	Val	Pro	Ser	Pro	Arg	Pro	Gly	355	360	365



Pro Tyr Arg Cys Tyr Ser Glu Glu Gln Gly Thr Arg Leu Ala Ala Glu  
625 630 635 640

Ser Tyr Leu Val Ala Val Val Ala Gly Ser Ser Val Thr Leu Glu Ala  
645 650 655

Arg Ala Pro Leu Glu Asn Leu Gly Leu Val Trp Leu Ala Val Val Ala  
660 665 670

Leu Gly Ala Val Cys Leu Val Leu Leu Leu Val Leu Ser Leu Arg  
675 680 685

Arg Arg Leu Arg Glu Glu Leu Glu Lys Gly Ala Lys Ala Ser Glu Arg  
690 695 700

Thr Leu Val Tyr Pro Leu Glu Leu Pro Lys Gly Pro Ala Ser Pro Pro  
705 710 715 720

Phe Arg Pro Gly Pro Glu Thr Asp Glu Lys Leu Trp Asp Pro Val Gly  
725 730 735

Tyr Tyr Tyr Ser Asp Gly Ser Leu Lys Ile Val Pro Gly His Ala Arg  
740 745 750

Cys Gln Pro Gly Gly Gly Pro Pro Ser Pro Pro Pro Gly Ile Pro Gly  
755 760 765

Gln Pro Leu Pro Ser Pro Thr Arg Leu His Leu Gly Gly Gly Arg Asn  
770 775 780

Ser Asn Ala Asn Gly Tyr Val Arg Leu Gln Leu Gly Gly Glu Asp Arg  
785 790 795 800

Gly Gly Ser Gly His Pro Leu Pro Glu Leu Ala Asp Glu Leu Arg Arg  
805 810 815

Lys Leu Gln Gln Arg Gln Pro Leu Pro Asp Ser Asn Pro Glu Glu Ser  
820 825 830

Ser Val

<210> 336

<211> 3503

<212> DNA

<213> Mus sp.

<400> 336

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gtgccccgga	agacagtatc	ttctggggag	ctggtcacag	tagtgaggcg	gttctcccag	240
acaggcatcc	aggacttcct	gacactgacc	ctgacagaac	attctggcct	tttatatgtg	300
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gcatgggcac	tgccacttgg	tgtggctcac	caggacttca	gcctcacagg	agacacaccc	2820

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<210> 337

<400> 337

000

<210> 338

<400> 338

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<210> 339

<211> 348

<212> PRT

<213> *Cricetulus griseus*

<400> 339

Met His Leu Pro Pro Ala Ala Ala Val Gly Leu Leu Leu Leu Leu Leu  
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Pro Pro Pro Ala Arg Val Ala Ser Arg Lys Pro Thr Met Cys Gln Arg  
20 25 30

Cys Arg Ala Leu Val Asp Lys Phe Asn Gln Gly Met Ala Asn Thr Ala  
35 40 45

Arg Lys Asn Phe Gly Gly Gly Asn Thr Ala Trp Glu Glu Lys Ser Leu  
50 55 60

Ser Lys Tyr Glu Phe Ser Glu Ile Arg Leu Leu Glu Ile Met Glu Gly  
65 70 75 80

Leu Cys Asp Ser Asn Asp Phe Glu Cys Asn Gln Leu Leu Glu Gln His  
85 90 95



Glu Glu Gln Leu Glu Ala Trp Trp Gln Thr Leu Lys Lys Glu Cys Pro  
 100 105 110

Asn Leu Phe Glu Trp Phe Cys Val His Thr Leu Lys Ala Cys Cys Leu  
 115 120 125

Pro Gly Thr Tyr Gly Pro Asp Cys Gln Glu Cys Gln Gly Gly Ser Gln  
 130 135 140

Arg Pro Cys Ser Gly Asn Gly His Cys Asp Gly Asp Gly Ser Arg Gln  
 145 150 155 160

Gly Asp Gly Ser Cys Gln Cys His Val Gly Tyr Lys Gly Pro Leu Cys  
 165 170 175

Ile Asp Cys Met Asp Gly Tyr Phe Ser Leu Leu Arg Asn Glu Thr His  
 180 185 190

Ser Phe Cys Thr Ala Cys Asp Glu Ser Cys Lys Thr Cys Ser Gly Pro  
 195 200 205

Thr Asn Lys Gly Cys Val Glu Cys Glu Val Gly Trp Thr Arg Val Glu  
 210 215 220

Asp Ala Cys Val Asp Val Asp Glu Cys Ala Ala Glu Thr Pro Pro Cys  
 225 230 235 240

Ser Asn Val Gln Tyr Cys Glu Asn Val Asn Gly Ser Tyr Thr Cys Glu  
 245 250 255

Glu Cys Asp Ser Thr Cys Val Gly Cys Thr Gly Lys Gly Pro Ala Asn  
 260 265 270

Cys Lys Glu Cys Ile Ser Gly Tyr Ser Lys Gln Lys Gly Glu Cys Ala  
 275 280 285

Asp Ile Asp Glu Cys Ser Leu Glu Thr Lys Val Cys Lys Lys Glu Asn  
 290 295 300

Glu Asn Cys Tyr Asn Thr Pro Gly Ser Phe Val Cys Val Cys Pro Glu  
 305 310 315 320

Gly Phe Glu Glu Asp Arg Arg Cys Leu Cys Thr Asp Ser Arg Arg Arg  
 325 330 335

Ser Gly Arg Gly Lys Ser His Thr Ala Thr Leu Pro  
 340 345

<210> 340  
 <211> 1399  
 <212> DNA  
 <213> *Cricetulus griseus*

<400> 340  
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 cagaggtgcc gggcgctggt ggacaagtgc aaccagggga tggccaacac ggccaggaag 240  
 aatttcggcg gcggcaacac ggcgtgggag gagaagagtc tgtccaagta cgaattcagt 300  
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 ggccactgcg acggagatgg cagcagacag ggcgacgggt cctgccagtg tcacgtagga 600  
 tacaaggggc cgctgtgtat cgactgcatg gatggctact tcagcttgct gaggaacgag 660  
 acccacagct tctgcacagc ctgtgatgag tcctgcaaga catgctcagg tccaaccaac 720  
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 ttgaaggtca ccaggaaca 1399

<210> 341  
 <211> 528  
 <212> PRT  
 <213> *Homo sapiens*

<400> 341  
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 Ala Pro Ala Ala Leu Ala Asp Val Leu Glu Gly Asp Ser Ser Glu Asp  
 20 25 30  
 Arg Ala Phe Arg Val Arg Ile Ala Gly Asp Ala Pro Leu Gln Gly Val  
 35 40 45



Arg	Pro	Pro	Thr	Gln	Pro	Pro	Thr	Gln	Leu	Asp	Gly	Leu	Glu	Ala	Ile	305	310	315	320
Val	Thr	Val	Thr	Glu	Thr	Leu	Glu	Glu	Leu	Gln	Leu	Pro	Gln	Glu	Ala	325	330	335	
Thr	Glu	Ser	Glu	Ser	Arg	Gly	Ala	Ile	Tyr	Ser	Ile	Pro	Ile	Met	Glu	340	345	350	
Asp	Gly	Gly	Gly	Gly	Ser	Ser	Thr	Pro	Glu	Asp	Pro	Ala	Glu	Ala	Pro	355	360	365	
Arg	Thr	Leu	Leu	Glu	Phe	Glu	Thr	Gln	Ser	Met	Val	Pro	Pro	Thr	Gly	370	375	380	
Phe	Ser	Glu	Glu	Glu	Gly	Lys	Ala	Leu	Glu	Glu	Glu	Glu	Lys	Tyr	Glu	385	390	395	400
Asp	Glu	Glu	Glu	Lys	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Val	Glu	Asp	405	410	415	
Glu	Ala	Leu	Trp	Ala	Trp	Pro	Ser	Glu	Leu	Ser	Ser	Pro	Gly	Pro	Glu	420	425	430	
Ala	Ser	Leu	Pro	Thr	Glu	Pro	Ala	Ala	Gln	Glu	Glu	Ser	Leu	Ser	Gln	435	440	445	
Ala	Pro	Ala	Arg	Ala	Val	Leu	Gln	Pro	Gly	Ala	Ser	Pro	Leu	Pro	Asp	450	455	460	
Gly	Glu	Ser	Glu	Ala	Ser	Arg	Pro	Pro	Arg	Val	His	Gly	Pro	Pro	Thr	465	470	475	480
Glu	Thr	Leu	Pro	Thr	Pro	Arg	Glu	Arg	Asn	Leu	Ala	Ser	Pro	Ser	Pro	485	490	495	
Ser	Thr	Leu	Val	Glu	Ala	Arg	Glu	Val	Gly	Glu	Ala	Thr	Gly	Gly	Pro	500	505	510	
Glu	Leu	Ser	Gly	Val	Pro	Arg	Gly	Gly	Ala	Arg	Thr	Gln	Phe	Ala	Leu	515	520	525	

<210> 342

<211> 883

<212> PRT

<213> Mus sp.

<400> 342

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Arg Ala Phe Arg Val Arg Ile Gly Ala Ala Gln Leu Arg Gly Val Leu  
35 40 45  
Gly Gly Ala Leu Ala Ile Pro Cys His Val His His Leu Arg Pro Pro  
50 55 60  
Arg Ser Arg Arg Ala Ala Pro Gly Phe Pro Arg Val Lys Trp Thr Phe  
65 70 75 80  
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Val Lys Val Asn Glu Ala Tyr Arg Phe Arg Val Ala Leu Pro Ala Tyr  
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Pro Ala Ser Leu Thr Asp Val Ser Leu Val Leu Ser Glu Leu Arg Pro  
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Asn Asp Ser Gly Val Tyr Arg Cys Glu Val Gln His Gly Ile Asp Asp  
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Ser Ser Asp Ala Val Glu Val Lys Val Lys Gly Val Val Phe Leu Tyr  
145 150 155 160  
Arg Glu Gly Ser Ala Arg Tyr Ala Phe Ser Phe Ala Gly Ala Gln Glu  
165 170 175  
Ala Cys Ala Arg Ile Gly Ala Arg Ile Ala Thr Pro Glu Gln Leu Tyr  
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Ala Ala Tyr Leu Gly Gly Tyr Glu Gln Cys Asp Ala Gly Trp Leu Ser  
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Asp Gln Thr Val Arg Tyr Pro Ile Gln Asn Pro Arg Glu Ala Cys Ser  
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Gly Asp Met Asp Gly Tyr Pro Gly Val Arg Asn Tyr Gly Val Val Gly  
225 230 235 240

Pro Asp Asp Leu Tyr Asp Val Tyr Cys Tyr Ala Glu Asp Leu Asn Gly  
 245 250 255  
 Glu Leu Phe Leu Gly Ala Pro Pro Ser Lys Leu Thr Trp Glu Glu Ala  
 260 265 270  
 Arg Asp Tyr Cys Leu Glu Arg Gly Ala Gln Ile Ala Ser Thr Gly Gln  
 275 280 285  
 Leu Tyr Ala Ala Trp Asn Gly Gly Leu Asp Arg Cys Ser Pro Gly Trp  
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 Cys Gly Gly Gly Leu Pro Gly Val Lys Thr Leu Phe Leu Phe Pro Asn  
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 Ser Ile Ala Pro Pro Thr Glu Ser Ser Glu Glu Glu Gly Val Ala Leu  
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 Glu Gln Glu Asp Leu Trp Val Trp Pro Arg Glu Leu Ser Ser Pro Leu  
 465 470 475 480  
 Pro Thr Gly Ser Glu Thr Glu His Ser Leu Ser Gln Val Ser Pro Pro  
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Ala	Gln	Ala	Val	Leu	Gln	Leu	Asp	Ala	Ser	Pro	Ser	Pro	Gly	Pro	Pro		
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Glu	Ser	Gln	Cys	Arg	Ala	Leu	Gly	Ala	His	Leu	Thr	Ser	Ile	Cys	Thr		
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705					710					715					720		
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Tyr Phe Leu Ser Gly Glu Asn Cys Val Val Met Val Trp His Asp Gln  
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Gly Gln Trp Ser Asp Val Pro Cys Asn Tyr His Leu Ser Tyr Thr Cys  
770 775 780

Lys Met Gly Leu Val Ser Cys Gly Pro Pro Pro Gln Leu Pro Leu Ala  
785 790 795 800

Gln Ile Phe Gly Arg Pro Arg Leu Arg Tyr Ala Val Asp Thr Val Leu  
805 810 815

Arg Tyr Arg Cys Arg Asp Gly Leu Ala Gln Arg Asn Leu Pro Leu Ile  
820 825 830

Arg Cys Gln Glu Asn Gly Leu Trp Glu Ala Pro Gln Ile Ser Cys Val  
835 840 845

Pro Arg Arg Pro Gly Arg Ala Leu Arg Ser Met Asp Ala Pro Glu Gly  
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Pro Arg Gly Gln Leu Ser Arg His Arg Lys Ala Pro Leu Thr Pro Pro  
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Ser Ser Leu

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<211> 3153

<212> DNA

<213> Mus sp.

<400> 343

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<210> 351  
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<212> DNA  
<213> Gerbil

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<210> 352  
 <211> 675  
 <212> DNA  
 <213> Gerbil

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<400> 352
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gaggacgagg gactaccttc ctatgaacag gcagtagctc tgaccagaaa acacagtgtc 600
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 <212> PRT  
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<400> 353

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Ala Val Pro His Thr Arg Ser Leu Lys Asn Ser Glu His Ala Pro Glu  
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Gly Val Phe Ala Ser Lys Lys Ala Ala Ser Ile Phe Met His Arg Arg  
35 40 45

Leu Leu Tyr Asn Arg Phe Asp Leu Glu Leu Phe Thr Pro Gly Asn Leu  
50 55 60

Glu Arg Glu Cys Tyr Glu Glu Phe Cys Ser Tyr Glu Glu Ala Arg Glu  
65 70 75 80

Ile Leu Gly Asp Asn Glu Glu Met Ile Thr Phe Trp Arg Glu Tyr Ser  
85 90 95

Val Lys Gly Pro Thr Thr Arg Ser Asp Val Asn Lys Glu Lys Ile Asp  
100 105 110

Val Met Gly Leu Leu Thr Gly Leu Ile Ala Ala Gly Val Phe Leu Val  
115 120 125

Val Phe Gly Leu Leu Gly Tyr Tyr Leu Cys Ile Thr Lys Cys Asn Arg  
130 135 140

Gln Pro Tyr Gln Gly Ser Ser Ala Val Tyr Thr Arg Arg Thr Arg His  
145 150 155 160

Thr Pro Ser Ile Ile Phe Arg Thr His Glu Glu Ala Val Leu Ser Pro  
165 170 175

Ser Ser Ser Ser Glu Asp Ala Gly Leu Pro Ser Tyr Glu Gln Ala Val  
180 185 190

Ala Leu Thr Arg Lys His Ser Val Ser Pro Pro Pro Pro Tyr Pro Gly  
195 200 205

Pro Ala Lys Gly Phe Arg Val Phe Lys Lys Ser Met Ser Leu Pro Ser  
210 215 220

His  
225

<210> 354

<211> 17  
 <212> PRT  
 <213> Gerbil

<400> 354  
 Met Phe Leu Leu Leu Val Val Leu Ser Gln Leu Pro Arg Leu Thr Leu  
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<210> 355  
 <211> 208  
 <212> PRT  
 <213> Gerbil

<400> 355  
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 35 40 45  
 Arg Glu Cys Tyr Glu Glu Phe Cys Ser Tyr Glu Glu Ala Arg Glu Ile  
 50 55 60  
 Leu Gly Asp Asn Glu Glu Met Ile Thr Phe Trp Arg Glu Tyr Ser Val  
 65 70 75 80  
 Lys Gly Pro Thr Thr Arg Ser Asp Val Asn Lys Glu Lys Ile Asp Val  
 85 90 95  
 Met Gly Leu Leu Thr Gly Leu Ile Ala Ala Gly Val Phe Leu Val Val  
 100 105 110  
 Phe Gly Leu Leu Gly Tyr Tyr Leu Cys Ile Thr Lys Cys Asn Arg Gln  
 115 120 125  
 Pro Tyr Gln Gly Ser Ser Ala Val Tyr Thr Arg Arg Thr Arg His Thr  
 130 135 140  
 Pro Ser Ile Ile Phe Arg Thr His Glu Glu Ala Val Leu Ser Pro Ser  
 145 150 155 160

Ser Ser Ser Glu Asp Ala Gly Leu Pro Ser Tyr Glu Gln Ala Val Ala  
165 170 175

Leu Thr Arg Lys His Ser Val Ser Pro Pro Pro Tyr Pro Gly Pro  
180 185 190

Ala Lys Gly Phe Arg Val Phe Lys Lys Ser Met Ser Leu Pro Ser His  
195 200 205

<210> 356

<211> 95

<212> PRT

<213> Gerbil

<400> 356

Val Pro His Thr Arg Ser Leu Lys Asn Ser Glu His Ala Pro Glu Gly  
1 5 10 15

Val Phe Ala Ser Lys Lys Ala Ala Ser Ile Phe Met His Arg Arg Leu  
20 25 30

Leu Tyr Asn Arg Phe Asp Leu Glu Leu Phe Thr Pro Gly Asn Leu Glu  
35 40 45

Arg Glu Cys Tyr Glu Glu Phe Cys Ser Tyr Glu Glu Ala Arg Glu Ile  
50 55 60

Leu Gly Asp Asn Glu Glu Met Ile Thr Phe Trp Arg Glu Tyr Ser Val  
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Lys Gly Pro Thr Thr Arg Ser Asp Val Asn Lys Glu Lys Ile Asp  
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<210> 357

<211> 25

<212> PRT

<213> Gerbil

<400> 357

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Val Phe Gly Leu Leu Gly Tyr Tyr Leu

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25

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<211> 88  
<212> PRT  
<213> Gerbil

<400> 358  
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Tyr Thr Arg Arg Thr Arg His Thr Pro Ser Ile Ile Phe Arg Thr His  
20 25 30

Glu Glu Ala Val Leu Ser Pro Ser Ser Ser Ser Glu Asp Ala Gly Leu  
35 40 45

Pro Ser Tyr Glu Gln Ala Val Ala Leu Thr Arg Lys His Ser Val Ser  
50 55 60

Pro Pro Pro Pro Tyr Pro Gly Pro Ala Lys Gly Phe Arg Val Phe Lys  
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Lys Ser Met Ser Leu Pro Ser His  
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<210> 359  
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<210> 360  
<400> 360  
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<210> 361  
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<210> 362  
<211> 962  
<212> DNA  
<213> Mus sp.

<400> 362

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<210> 363

<211> 320

<212> PRT

<213> Mus sp.

<400> 363

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Thr Leu Asp Leu Ser Ser Asn Trp Leu Lys His Ile Ser Ile Pro Glu
                20               25               30

Leu Ala Ala Leu Pro Thr Tyr Leu Lys Asn Arg Leu Tyr Leu His Asn
 35               40               45

Asn Pro Leu Pro Cys Asp Cys Ser Leu Tyr His Leu Leu Arg Arg Trp
 50               55               60

His Gln Arg Gly Leu Ser Ala Leu His Asp Phe Glu Arg Glu Tyr Thr
 65               70               75               80

Cys Leu Val Phe Lys Val Ser Glu Ser Arg Val Arg Phe Phe Glu His
                85               90               95

Ser Arg Val Phe Lys Asn Cys Ser Val Ala Ala Ala Pro Gly Leu Glu
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Leu Pro Glu Glu Gln Leu His Ala Gln Val Gly Gln Ser Leu Arg Leu

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Val Leu Ala Asp Gly Ser	Leu Ala Ile Gly Arg Val Gln Glu Gln His			
165	170	175		
Ala Gly Val Phe Val Cys	Leu Ala Ser Gly Pro Arg Leu His His Asn			
180	185	190		
Gln Thr Leu Glu Tyr Asn	Val Ser Val Gln Lys Ala Arg Pro Glu Pro			
195	200	205		
Glu Thr Phe Asn Thr Gly	Phe Thr Thr Leu Leu Gly Cys Ile Val Gly			
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Leu Val Leu Val Leu Leu	Tyr Leu Phe Ala Pro Pro Cys Arg Gly Cys			
225	230	235	240	
Cys His Cys Cys Gln Arg	Ala Cys Arg Asn Arg Cys Trp Pro Arg Ala			
245	250	255		
Ser Ser Pro Leu Gln Glu	Leu Ser Ala Gln Ser Ser Met Leu Ser Thr			
260	265	270		
Thr Pro Pro Asp Ala Pro	Ser Arg Lys Ala Ser Val His Lys His Val			
275	280	285		
Val Phe Leu Glu Pro Gly	Lys Lys Gly Leu Asn Gly Arg Val Gln Leu			
290	295	300		
Ala Val Pro Pro Asp Ser	Asp Leu Cys Asn Pro Met Gly Leu Gln Leu			
305	310	315	320	

<210> 364  
 <211> 16  
 <212> PRT  
 <213> Mus sp.  
  
 <400> 364



Leu Val Leu Val Leu Leu Tyr Leu Phe Ala Pro Pro Cys Arg Gly Cys  
 210 215 220

Cys His Cys Cys Gln Arg Ala Cys Arg Asn Arg Cys Trp Pro Arg Ala  
 225 230 235 240

Ser Ser Pro Leu Gln Glu Leu Ser Ala Gln Ser Ser Met Leu Ser Thr  
 245 250 255

Thr Pro Pro Asp Ala Pro Ser Arg Lys Ala Ser Val His Lys His Val  
 260 265 270

Val Phe Leu Glu Pro Gly Lys Lys Gly Leu Asn Gly Arg Val Gln Leu  
 275 280 285

Ala Val Pro Pro Asp Ser Asp Leu Cys Asn Pro Met Gly Leu Gln Leu  
 290 295 300

<210> 366

<211> 197

<212> PRT

<213> Mus sp.

<400> 366

Thr Leu Asp Leu Ser Ser Asn Trp Leu Lys His Ile Ser Ile Pro Glu  
 1 5 10 15

Leu Ala Ala Leu Pro Thr Tyr Leu Lys Asn Arg Leu Tyr Leu His Asn  
 20 25 30

Asn Pro Leu Pro Cys Asp Cys Ser Leu Tyr His Leu Leu Arg Arg Trp  
 35 40 45

His Gln Arg Gly Leu Ser Ala Leu His Asp Phe Glu Arg Glu Tyr Thr  
 50 55 60

Cys Leu Val Phe Lys Val Ser Glu Ser Arg Val Arg Phe Phe Glu His  
 65 70 75 80

Ser Arg Val Phe Lys Asn Cys Ser Val Ala Ala Ala Pro Gly Leu Glu  
 85 90 95

Leu Pro Glu Glu Gln Leu His Ala Gln Val Gly Gln Ser Leu Arg Leu

100	105	110
Phe Cys Asn Thr Ser Val Pro Ala Thr Arg Val Ala Trp Val Ser Pro		
115	120	125
Lys Asn Glu Leu Leu Val Ala Pro Ala Ser Gln Asp Gly Ser Ile Ala		
130	135	140
Val Leu Ala Asp Gly Ser Leu Ala Ile Gly Arg Val Gln Glu Gln His		
145	150	155
Ala Gly Val Phe Val Cys Leu Ala Ser Gly Pro Arg Leu His His Asn		
165	170	175
Gln Thr Leu Glu Tyr Asn Val Ser Val Gln Lys Ala Arg Pro Glu Pro		
180	185	190
Glu Thr Phe Asn Thr		
195		
<210> 367		
<211> 20		
<212> PRT		
<213> Mus sp.		
<400> 367		
Gly Phe Thr Thr Leu Leu Gly Cys Ile Val Gly Leu Val Leu Val Leu		
1 5 10 15		
Leu Tyr Leu Phe		
20		
<210> 368		
<211> 87		
<212> PRT		
<213> Mus sp.		
<400> 368		
Ala Pro Pro Cys Arg Gly Cys Cys His Cys Cys Gln Arg Ala Cys Arg		
1 5 10 15		
Asn Arg Cys Trp Pro Arg Ala Ser Ser Pro Leu Gln Glu Leu Ser Ala		
20 25 30		
Gln Ser Ser Met Leu Ser Thr Thr Pro Pro Asp Ala Pro Ser Arg Lys		
35 40 45		

Ala Ser Val His Lys His Val Val Phe Leu Glu Pro Gly Lys Lys Gly  
 50 55 60

Leu Asn Gly Arg Val Gln Leu Ala Val Pro Pro Asp Ser Asp Leu Cys  
 65 70 75 80

Asn Pro Met Gly Leu Gln Leu  
 85

<210> 369

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR Primer

<400> 369

attattcaga aggatgtccc gtgg

24

<210> 370

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR Primer

<400> 370

cctcctgatt acctacaatg gtc

23

<210> 371

<211> 1656

<212> DNA

<213> Homo sapiens

<400> 371

gtcgacccac gcgtccgccc acgcgtccgg cccatggcgc cgcccgcgc ccgcctcgcc 60  
 ctgctctccg ccgcggcgct cagctggcg gcccgcccgc cgctagccc cggcctcggc 120  
 cccggaccgc agtgtttcac agccaatggt gcggattata ggggaacaca gaactggaca 180  
 gcactacaag gcgggaagcc atgtctgttt tggaacgaga ctttccagca tccatacaac 240  
 actctgaaat accccaacgc ggaggggggc ctgggtgagc acaactattg cagaaatcca 300  
 gatggagacg tgagcccctg gtgctatgtg gcagagcacg aggatggtgt ctactggaag 360  
 tactgtgaga tacctgcttg ccagatgcct ggaaaccttg gctgctacaa ggatcatgga 420

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aaccacacac ctctaactgg caccagtaaa acgtccaaca aactcaccat acaaacttgc 480
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ttctgtggaa acaatcctga ttactggaag tacggggagg cagccagtag cgaatgcaac 600
agcgtctgct tcgggggatca caccacaacc tgtggtggcg atggcaggat catcctcttt 660
gatactctcg tgggcgcctg cgggtgggaac tactcagcca tgtcttctgt ggtctattcc 720
cctgacttcc ccgacaccta tgccacgggg agggctctgct actggaccat ccgggttccg 780
ggggcctccc acatccactt cagcttcccc ctatttgaca tcagggactc ggcggacatg 840
gtggagcttc tggatggcta caccacccgt gtcctagccc gcttccacgg gaggagccgc 900
ccacctctgt ccttcaacgt ctctctggac ttcgatcatct tgtatttctt ctctgatcgc 960
atcaatcagg cccagggatt tgctgtttta taccaagccg tcaaggaaga actgccacag 1020
gagaggcccg ctgtcaacca gacggtggcc gaggtgatca cggagcaggc caacctcagt 1080
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cctcagactg tcccaggtag caattcctgg gcgccaccca tgggggctgg aagccacaga 1200
gttgaaggat ggacagtcta tggctctggca actctcctca tcctcacagt cacagccatt 1260
gtagcaaga tacttctgca cgtcacattc aaatcccatc gtgttctctc ttcaggggac 1320
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ctgccagggc aggcagagcc tggattcctc ctgctt 1656

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<210> 372  
 <211> 1425  
 <212> DNA  
 <213> Homo sapiens

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<400> 372
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gattataggg gaacacagaa ctggacagca ctacaaggcg ggaagccatg tctgttttgg 180
aacgagactt tccagcatcc atacaacact ctgaaatacc ccaacgggga ggggggcctg 240
ggtgagcaca actattgcag aaatccagat ggagacgtga gcccctggtg ctatgtggca 300
gagcacgagg atggtgtcta ctggaagtac tgtgagatac ctgcttgcca gatgcctgga 360
aaccttggct gctacaagga tcatggaaac ccacctcctc taactggcac cagtaaaacg 420
tccaacaaac tcaccataca aacttgcatc agtttttgtc ggagtcagag gttcaagttt 480
gctgggatgg agtcaggcta tgcttgcttc tgtggaacaa atcctgatta ctggaagtac 540
ggggaggcag ccagtaccga atgcaacagc gtctgcttgc gggatcacac ccaacctgt 600
ggtggcgatg gcaggatcat cctctttgat actctcgtgg gcgcctgcgg tgggaactac 660
tcagccatgt cttctgtggt ctattcccc gacttccccg acacctatgc cacggggagg 720
gtctgtact ggaccatccg ggttcggggg gcctcccaca tccacttcag ctcccccta 780
tttgacatca gggactcggc ggacatggtg gagcttctgg atggctacac ccaccgtgtc 840
ctagcccgt tccacgggag gagccgcca cctctgtcct tcaacgtctc tctggacttc 900
gtcatcttgt atttcttctc tgatcgcatc aatcaggccc agggatttgc tgttttatac 960
caagccgtca aggaagaact gccacaggag agggccgctg tcaaccagac ggtggccgag 1020
gtgatcacgg agcaggccaa cctcagtgtc agcgtgccc ggtcctccaa agtcctctat 1080
gtcatcacca ccagccccag ccaccacct cagactgtcc caggtagcaa ttctggggcg 1140

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ccacccatgg gggctggaag ccacagagtt gaaggatgga cagtctatgg tctggcaact 1200  
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 tcccatcgtg ttctgcttc aggggacctt agggattgtc atcaaccagg gacttcgggg 1320  
 gaaatctgga gcatttttta caagccttcc acttcaattt ccatctttta gaagaaactc 1380  
 aagggtcaga gtcaacaaga tgaccgcaat ccccttgtga gtagac 1425

<210> 373

<211> 475

<212> PRT

<213> Homo sapiens

<400> 373

Met Ala Pro Pro Ala Ala Arg Leu Ala Leu Leu Ser Ala Ala Ala Leu  
 1 5 10 15

Thr Leu Ala Ala Arg Pro Ala Pro Ser Pro Gly Leu Gly Pro Gly Pro  
 20 25 30

Glu Cys Phe Thr Ala Asn Gly Ala Asp Tyr Arg Gly Thr Gln Asn Trp  
 35 40 45

Thr Ala Leu Gln Gly Gly Lys Pro Cys Leu Phe Trp Asn Glu Thr Phe  
 50 55 60

Gln His Pro Tyr Asn Thr Leu Lys Tyr Pro Asn Gly Glu Gly Gly Leu  
 65 70 75 80

Gly Glu His Asn Tyr Cys Arg Asn Pro Asp Gly Asp Val Ser Pro Trp  
 85 90 95

Cys Tyr Val Ala Glu His Glu Asp Gly Val Tyr Trp Lys Tyr Cys Glu  
 100 105 110

Ile Pro Ala Cys Gln Met Pro Gly Asn Leu Gly Cys Tyr Lys Asp His  
 115 120 125

Gly Asn Pro Pro Pro Leu Thr Gly Thr Ser Lys Thr Ser Asn Lys Leu  
 130 135 140

Thr Ile Gln Thr Cys Ile Ser Phe Cys Arg Ser Gln Arg Phe Lys Phe  
 145 150 155 160

Ala Gly Met Glu Ser Gly Tyr Ala Cys Phe Cys Gly Asn Asn Pro Asp  
 165 170 175

Tyr Trp Lys Tyr Gly Glu Ala Ala Ser Thr Glu Cys Asn Ser Val Cys  
 180 185 190

Phe Gly Asp His Thr Gln Pro Cys Gly Gly Asp Gly Arg Ile Ile Leu  
195 200 205

Phe Asp Thr Leu Val Gly Ala Cys Gly Gly Asn Tyr Ser Ala Met Ser  
210 215 220

Ser Val Val Tyr Ser Pro Asp Phe Pro Asp Thr Tyr Ala Thr Gly Arg  
225 230 235 240

Val Cys Tyr Trp Thr Ile Arg Val Pro Gly Ala Ser His Ile His Phe  
245 250 255

Ser Phe Pro Leu Phe Asp Ile Arg Asp Ser Ala Asp Met Val Glu Leu  
260 265 270

Leu Asp Gly Tyr Thr His Arg Val Leu Ala Arg Phe His Gly Arg Ser  
275 280 285

Arg Pro Pro Leu Ser Phe Asn Val Ser Leu Asp Phe Val Ile Leu Tyr  
290 295 300

Phe Phe Ser Asp Arg Ile Asn Gln Ala Gln Gly Phe Ala Val Leu Tyr  
305 310 315 320

Gln Ala Val Lys Glu Glu Leu Pro Gln Glu Arg Pro Ala Val Asn Gln  
325 330 335

Thr Val Ala Glu Val Ile Thr Glu Gln Ala Asn Leu Ser Val Ser Ala  
340 345 350

Ala Arg Ser Ser Lys Val Leu Tyr Val Ile Thr Thr Ser Pro Ser His  
355 360 365

Pro Pro Gln Thr Val Pro Gly Ser Asn Ser Trp Ala Pro Pro Met Gly  
370 375 380

Ala Gly Ser His Arg Val Glu Gly Trp Thr Val Tyr Gly Leu Ala Thr  
385 390 395 400

Leu Leu Ile Leu Thr Val Thr Ala Ile Val Ala Lys Ile Leu Leu His  
405 410 415

Val Thr Phe Lys Ser His Arg Val Pro Ala Ser Gly Asp Leu Arg Asp  
420 425 430

Cys His Gln Pro Gly Thr Ser Gly Glu Ile Trp Ser Ile Phe Tyr Lys  
435 440 445



Pro Ser Thr Ser Ile Ser Ile Phe Lys Lys Lys Leu Lys Gly Gln Ser  
 450 455 460

Gln Gln Asp Asp Arg Asn Pro Leu Val Ser Asp  
 465 470 475

<210> 374  
 <211> 19  
 <212> PRT  
 <213> Homo sapiens

<400> 374  
 Met Ala Pro Pro Ala Ala Arg Leu Ala Leu Leu Ser Ala Ala Ala Leu  
 1 5 10 15

Thr Leu Ala

<210> 375  
 <211> 456  
 <212> PRT  
 <213> Homo sapiens

<400> 375  
 Ala Arg Pro Ala Pro Ser Pro Gly Leu Gly Pro Gly Pro Glu Cys Phe  
 1 5 10 15

Thr Ala Asn Gly Ala Asp Tyr Arg Gly Thr Gln Asn Trp Thr Ala Leu  
 20 25 30

Gln Gly Gly Lys Pro Cys Leu Phe Trp Asn Glu Thr Phe Gln His Pro  
 35 40 45

Tyr Asn Thr Leu Lys Tyr Pro Asn Gly Glu Gly Gly Leu Gly Glu His  
 50 55 60

Asn Tyr Cys Arg Asn Pro Asp Gly Asp Val Ser Pro Trp Cys Tyr Val  
 65 70 75 80

Ala Glu His Glu Asp Gly Val Tyr Trp Lys Tyr Cys Glu Ile Pro Ala  
 85 90 95

Cys Gln Met Pro Gly Asn Leu Gly Cys Tyr Lys Asp His Gly Asn Pro  
 100 105 110

Pro Pro Leu Thr Gly Thr Ser Lys Thr Ser Asn Lys Leu Thr Ile Gln  
 115 120 125  
 Thr Cys Ile Ser Phe Cys Arg Ser Gln Arg Phe Lys Phe Ala Gly Met  
 130 135 140  
 Glu Ser Gly Tyr Ala Cys Phe Cys Gly Asn Asn Pro Asp Tyr Trp Lys  
 145 150 155 160  
 Tyr Gly Glu Ala Ala Ser Thr Glu Cys Asn Ser Val Cys Phe Gly Asp  
 165 170 175  
 His Thr Gln Pro Cys Gly Gly Asp Gly Arg Ile Ile Leu Phe Asp Thr  
 180 185 190  
 Leu Val Gly Ala Cys Gly Gly Asn Tyr Ser Ala Met Ser Ser Val Val  
 195 200 205  
 Tyr Ser Pro Asp Phe Pro Asp Thr Tyr Ala Thr Gly Arg Val Cys Tyr  
 210 215 220  
 Trp Thr Ile Arg Val Pro Gly Ala Ser His Ile His Phe Ser Phe Pro  
 225 230 235 240  
 Leu Phe Asp Ile Arg Asp Ser Ala Asp Met Val Glu Leu Leu Asp Gly  
 245 250 255  
 Tyr Thr His Arg Val Leu Ala Arg Phe His Gly Arg Ser Arg Pro Pro  
 260 265 270  
 Leu Ser Phe Asn Val Ser Leu Asp Phe Val Ile Leu Tyr Phe Phe Ser  
 275 280 285  
 Asp Arg Ile Asn Gln Ala Gln Gly Phe Ala Val Leu Tyr Gln Ala Val  
 290 295 300  
 Lys Glu Glu Leu Pro Gln Glu Arg Pro Ala Val Asn Gln Thr Val Ala  
 305 310 315 320  
 Glu Val Ile Thr Glu Gln Ala Asn Leu Ser Val Ser Ala Ala Arg Ser  
 325 330 335  
 Ser Lys Val Leu Tyr Val Ile Thr Thr Ser Pro Ser His Pro Pro Gln  
 340 345 350  
 Thr Val Pro Gly Ser Asn Ser Trp Ala Pro Pro Met Gly Ala Gly Ser  
 355 360 365

His Arg Val Glu Gly Trp Thr Val Tyr Gly Leu Ala Thr Leu Leu Ile  
370 375 380

Leu Thr Val Thr Ala Ile Val Ala Lys Ile Leu Leu His Val Thr Phe  
385 390 395 400

Lys Ser His Arg Val Pro Ala Ser Gly Asp Leu Arg Asp Cys His Gln  
405 410 415

Pro Gly Thr Ser Gly Glu Ile Trp Ser Ile Phe Tyr Lys Pro Ser Thr  
420 425 430

Ser Ile Ser Ile Phe Lys Lys Lys Leu Lys Gly Gln Ser Gln Gln Asp  
435 440 445

Asp Arg Asn Pro Leu Val Ser Asp  
450 455

<210> 376

<211> 373

<212> PRT

<213> Homo sapiens

<400> 376

Ala Arg Pro Ala Pro Ser Pro Gly Leu Gly Pro Gly Pro Glu Cys Phe  
1 5 10 15

Thr Ala Asn Gly Ala Asp Tyr Arg Gly Thr Gln Asn Trp Thr Ala Leu  
20 25 30

Gln Gly Gly Lys Pro Cys Leu Phe Trp Asn Glu Thr Phe Gln His Pro  
35 40 45

Tyr Asn Thr Leu Lys Tyr Pro Asn Gly Glu Gly Gly Leu Gly Glu His  
50 55 60

Asn Tyr Cys Arg Asn Pro Asp Gly Asp Val Ser Pro Trp Cys Tyr Val  
65 70 75 80

Ala Glu His Glu Asp Gly Val Tyr Trp Lys Tyr Cys Glu Ile Pro Ala  
85 90 95

Cys Gln Met Pro Gly Asn Leu Gly Cys Tyr Lys Asp His Gly Asn Pro  
100 105 110

Pro Pro Leu Thr Gly Thr Ser Lys Thr Ser Asn Lys Leu Thr Ile Gln  
115 120 125

Thr Cys Ile Ser Phe Cys Arg Ser Gln Arg Phe Lys Phe Ala Gly Met  
 130 135 140  
 Glu Ser Gly Tyr Ala Cys Phe Cys Gly Asn Asn Pro Asp Tyr Trp Lys  
 145 150 155 160  
 Tyr Gly Glu Ala Ala Ser Thr Glu Cys Asn Ser Val Cys Phe Gly Asp  
 165 170 175  
 His Thr Gln Pro Cys Gly Gly Asp Gly Arg Ile Ile Leu Phe Asp Thr  
 180 185 190  
 Leu Val Gly Ala Cys Gly Gly Asn Tyr Ser Ala Met Ser Ser Val Val  
 195 200 205  
 Tyr Ser Pro Asp Phe Pro Asp Thr Tyr Ala Thr Gly Arg Val Cys Tyr  
 210 215 220  
 Trp Thr Ile Arg Val Pro Gly Ala Ser His Ile His Phe Ser Phe Pro  
 225 230 235 240  
 Leu Phe Asp Ile Arg Asp Ser Ala Asp Met Val Glu Leu Leu Asp Gly  
 245 250 255  
 Tyr Thr His Arg Val Leu Ala Arg Phe His Gly Arg Ser Arg Pro Pro  
 260 265 270  
 Leu Ser Phe Asn Val Ser Leu Asp Phe Val Ile Leu Tyr Phe Phe Ser  
 275 280 285  
 Asp Arg Ile Asn Gln Ala Gln Gly Phe Ala Val Leu Tyr Gln Ala Val  
 290 295 300  
 Lys Glu Glu Leu Pro Gln Glu Arg Pro Ala Val Asn Gln Thr Val Ala  
 305 310 315 320  
 Glu Val Ile Thr Glu Gln Ala Asn Leu Ser Val Ser Ala Ala Arg Ser  
 325 330 335  
 Ser Lys Val Leu Tyr Val Ile Thr Thr Ser Pro Ser His Pro Pro Gln  
 340 345 350  
 Thr Val Pro Gly Ser Asn Ser Trp Ala Pro Pro Met Gly Ala Gly Ser  
 355 360 365  
 His Arg Val Glu Gly  
 370

<210> 377  
 <211> 23  
 <212> PRT  
 <213> Homo sapiens

<400> 377  
 Trp Thr Val Tyr Gly Leu Ala Thr Leu Leu Ile Leu Thr Val Thr Ala  
 1 5 10 15  
 Ile Val Ala Lys Ile Leu Leu  
 20

<210> 378  
 <211> 60  
 <212> PRT  
 <213> Homo sapiens

<400> 378  
 His Val Thr Phe Lys Ser His Arg Val Pro Ala Ser Gly Asp Leu Arg  
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 Asp Cys His Gln Pro Gly Thr Ser Gly Glu Ile Trp Ser Ile Phe Tyr  
 20 25 30  
 Lys Pro Ser Thr Ser Ile Ser Ile Phe Lys Lys Lys Leu Lys Gly Gln  
 35 40 45  
 Ser Gln Gln Asp Asp Arg Asn Pro Leu Val Ser Asp  
 50 55 60

<210> 379  
 <211> 4628  
 <212> DNA  
 <213> Homo sapiens

<400> 379  
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 cttgatgatg tttcctgtta tggaaatgag tcagctctct gggaatgtca acaccgggaa 420  
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 catgcagaca catggcgctc tgtctgtgat tctgatttct ctcttcacgc tgccaatgtg 2520  
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 gcaaattgat ctgaccataa tttgtctgca gttccagagg gcagtgcctt gatctgctta 3120  
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 gtggtgtgtc aaaagctggg ctgtggagtg gccttcaatg ccacggtctc tgctcacttt 3300  
 ggggaggggt cagggcccat ctggctggat gacctgaact gcacaggaac ggagtccac 3360

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tgtgctggga gattggaagt cttctataac gggacctggg gcagcgtcgg caggaggaac 3540
atcaccacag ccatagcagg cattgtgtgc aggcagctgg gctgtgggga gaatggagtt 3600
gtcagcctcg cccctttatc taagacaggc tctggtttca tgtgggtgga tgacattcag 3660
tgtcctaaaa cgcataatct catatggcag tgctgtctg ccccatggga gcgaagaatc 3720
tccagcccag cagaagagac ctggatcaca tgtgaagata gaataagagt gcgtggagga 3780
gacaccgagt gctctgggag agtggagatc tggcacgcag gctcctgggg cacagtgtgt 3840
gatgactcct gggacctggc cgaggcggaa gtggtgtgtc agcagctggg ctgtggctct 3900
gctctggctg ccctgagggg cgcttcgttt ggccagggaa ctggaaccat ctggttgat 3960
gacatgcggt gcaaaggaaa tgagtcattt ctatgggact gtcacgcaa accctgggga 4020
cagagtgact gtggacacaa ggaagatgct ggcgtgaggt gctctggaca gtcgctgaaa 4080
tactgaatg cctcctcagg tcatttagca cttattttat ccagtatctt tgggctcctt 4140
ctcctgggtt tggtttattt atttctcacg tggtgccgag ttcagaaaca aaaacatctg 4200
cccctcagag tttcaaccag aaggagggtt tctctcgagg agaatttatt ccatgagatg 4260
gagacctgcc tcaagagaga ggacccacat gggacaagaa cctcagatga ccccccaac 4320
catggttgtg aagatgctag cgacacatcg ctggtgggag ttcttcctgc ctctgaagcc 4380
acaaaatgac tttagacttc cagggtcac cagatcaacc tctaaatata tttgaaggag 4440
acaacaactt ttaaataaat aaagaggaag tcaagttgcc ctatggaaaa cttgtccaaa 4500
taacatttct tgaacaatat gagaacagct aaattgataa agactggtga taataaaaaat 4560
tgaattatgt atatcactgt taaaaaaaaa aaaaaaaaaa aaaaaaaaaa acggacgcgt 4620
gggtcgac 4628

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<210> 380  
 <211> 4359  
 <212> DNA  
 <213> Homo sapiens

```

<400> 380
atgatgctgc ctcaaaactc gtggcatatt gattttggaa gatgctgctg tcatcagaac 60
cttttctctg ctgtggtaac ttgcatcctg ctctgaatt cctgctttct catcagcagt 120
tttaatggaa cagatttgga gttgaggctg gtcaatggag acggtccctg ctctgggaca 180
gtggaggtga aattccaggg acagtggggg actgtgtgtg atgatgggtg gaacactact 240
gcctcaactg tcgtgtgcaa acagcttgga tgtccatttt ctttcgccat gtttcgtttt 300
ggacaagccg tgactagaca tggaaaaaatt tggcttgatg atgtttcctg ttatggaaat 360
gagtcagctc tctgggaatg tcaacaccgg gaatggggaa gccataactg ttatcatgga 420
gaagatgttg gtgtgaactg ttatggtgaa gccaatctgg gtttgaggct agtggatgga 480
aacaactcct gttcagggag agtggagggt aaattccaag aaaggtgggg gactatatgt 540
gatgatgggt ggaacttgaa tactgctgcc gtggtgtgca ggcaactagg atgtccatct 600
tcttttattt cttctggagt tgttaatagc cctgctgtat tgcgccccat ttggctggat 660
gacattttat gccaggggaa tgagttggca ctctggaatt gcagacatcg tggatgggga 720
aatcatgact gcagtcacaa tgaggatgtc acattaactt gttatgatag tagtgatctt 780
gaactaaggc ttgtaggttg aactaaccgc tgtatgggga gagtagagct gaaaatccaa 840
ggaaggtggg ggaccgtatg ccaccataag tggacaatg ctgcagctga tgtcgtatgc 900
aagcagttgg gatgtggaac cgcacttcac ttcgctggct tgcctcattt gcagtcaggg 960
tctgatgttg tatggcttga tgggtgtctc tgctccggtg atgaatcttt tctttgggac 1020
tgcagacatt ccggaaccgt caattttgac tgtcttcac aaacgatgt gtctgtgatc 1080

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tttctatggg actgtcacgc caaacccctgg ggacagagtg actgtggaca caaggaagat 4020
gctggcgtga ggtgctctgg acagtcgctg aaatcactga atgcctcctc aggtcattta 4080
gcacttattt tatccagtat ctttgggctc cttctcctgg ttctgtttat tctattttctc 4140
acgtgggtgcc gagttcagaa acaaaaaacat ctgcccctca qagtttcaac cagaaggagg 4200
ggttctctcg aggagaattt attccatgag atggagacct gcctcaagag agaggaccca 4260
catgggacaa gaacctcaga tgacaccccc aaccatggtt gtgaagatgc tagcgacaca 4320
tcgctgttgg gagttcttcc tgccctctgaa gccacaaaa 4359

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<210> 381  
 <211> 1453  
 <212> PRT  
 <213> Homo sapiens

<400> 381  
 Met Met Leu Pro Gln Asn Ser Trp His Ile Asp Phe Gly Arg Cys Cys  
 1 5 10 15

Cys His Gln Asn Leu Phe Ser Ala Val Val Thr Cys Ile Leu Leu Leu  
 20 25 30

Asn Ser Cys Phe Leu Ile Ser Ser Phe Asn Gly Thr Asp Leu Glu Leu  
 35 40 45

Arg Leu Val Asn Gly Asp Gly Pro Cys Ser Gly Thr Val Glu Val Lys  
 50 55 60

Phe Gln Gly Gln Trp Gly Thr Val Cys Asp Asp Gly Trp Asn Thr Thr  
 65 70 75 80

Ala Ser Thr Val Val Cys Lys Gln Leu Gly Cys Pro Phe Ser Phe Ala  
 85 90 95

Met Phe Arg Phe Gly Gln Ala Val Thr Arg His Gly Lys Ile Trp Leu  
 100 105 110

Asp Asp Val Ser Cys Tyr Gly Asn Glu Ser Ala Leu Trp Glu Cys Gln  
 115 120 125

His Arg Glu Trp Gly Ser His Asn Cys Tyr His Gly Glu Asp Val Gly  
 130 135 140

Val Asn Cys Tyr Gly Glu Ala Asn Leu Gly Leu Arg Leu Val Asp Gly  
 145 150 155 160

Asn Asn Ser Cys Ser Gly Arg Val Glu Val Lys Phe Gln Glu Arg Trp  
 165 170 175

Gly Thr Ile Cys Asp Asp Gly Trp Asn Leu Asn Thr Ala Ala Val Val	180	185	190
Cys Arg Gln Leu Gly Cys Pro Ser Ser Phe Ile Ser Ser Gly Val Val	195	200	205
Asn Ser Pro Ala Val Leu Arg Pro Ile Trp Leu Asp Asp Ile Leu Cys	210	215	220
Gln Gly Asn Glu Leu Ala Leu Trp Asn Cys Arg His Arg Gly Trp Gly	225	230	235 240
Asn His Asp Cys Ser His Asn Glu Asp Val Thr Leu Thr Cys Tyr Asp	245	250	255
Ser Ser Asp Leu Glu Leu Arg Leu Val Gly Gly Thr Asn Arg Cys Met	260	265	270
Gly Arg Val Glu Leu Lys Ile Gln Gly Arg Trp Gly Thr Val Cys His	275	280	285
His Lys Trp Asn Asn Ala Ala Ala Asp Val Val Cys Lys Gln Leu Gly	290	295	300
Cys Gly Thr Ala Leu His Phe Ala Gly Leu Pro His Leu Gln Ser Gly	305	310	315 320
Ser Asp Val Val Trp Leu Asp Gly Val Ser Cys Ser Gly Asn Glu Ser	325	330	335
Phe Leu Trp Asp Cys Arg His Ser Gly Thr Val Asn Phe Asp Cys Leu	340	345	350
His Gln Asn Asp Val Ser Val Ile Cys Ser Asp Gly Ala Asp Leu Glu	355	360	365
Leu Arg Leu Ala Asp Gly Ser Asn Asn Cys Ser Gly Arg Val Glu Val	370	375	380
Arg Ile His Glu Gln Trp Trp Thr Ile Cys Asp Gln Asn Trp Lys Asn	385	390	395 400
Glu Gln Ala Leu Val Val Cys Lys Gln Leu Gly Cys Pro Phe Ser Val	405	410	415
Phe Gly Ser Arg Arg Ala Lys Pro Ser Asn Glu Ala Arg Asp Ile Trp	420	425	430



Glu	Leu	Arg	Leu	Val	Gly	Gly	Ser	Ser	Arg	Cys	Ala	Gly	Lys	Val	Glu	690	695	700	
Val	Asn	Val	Gln	Gly	Ala	Val	Gly	Ile	Leu	Cys	Ala	Asn	Gly	Trp	Gly	705	710	715	720
Met	Asn	Ile	Ala	Glu	Val	Val	Cys	Arg	Gln	Leu	Glu	Cys	Gly	Ser	Ala	725	730	735	
Ile	Arg	Val	Ser	Arg	Glu	Pro	His	Phe	Thr	Glu	Arg	Thr	Leu	His	Ile	740	745	750	
Leu	Met	Ser	Asn	Ser	Gly	Cys	Thr	Gly	Gly	Glu	Ala	Ser	Leu	Trp	Asp	755	760	765	
Cys	Ile	Arg	Trp	Glu	Trp	Lys	Gln	Thr	Ala	Cys	His	Leu	Asn	Met	Glu	770	775	780	
Ala	Ser	Leu	Ile	Cys	Ser	Ala	His	Arg	Gln	Pro	Arg	Leu	Val	Gly	Ala	785	790	795	800
Asp	Met	Pro	Cys	Ser	Gly	Arg	Val	Glu	Val	Lys	His	Ala	Asp	Thr	Trp	805	810	815	
Arg	Ser	Val	Cys	Asp	Ser	Asp	Phe	Ser	Leu	His	Ala	Ala	Asn	Val	Leu	820	825	830	
Cys	Arg	Glu	Leu	Asn	Cys	Gly	Asp	Ala	Ile	Ser	Leu	Ser	Val	Gly	Asp	835	840	845	
His	Phe	Gly	Lys	Gly	Asn	Gly	Leu	Thr	Trp	Ala	Glu	Lys	Phe	Gln	Cys	850	855	860	
Glu	Gly	Ser	Glu	Thr	His	Leu	Ala	Leu	Cys	Pro	Ile	Val	Gln	His	Pro	865	870	875	880
Glu	Asp	Thr	Cys	Ile	His	Ser	Arg	Glu	Val	Gly	Val	Val	Cys	Ser	Arg	885	890	895	
Tyr	Thr	Asp	Val	Arg	Leu	Val	Asn	Gly	Lys	Ser	Gln	Cys	Asp	Gly	Gln	900	905	910	
Val	Glu	Ile	Asn	Val	Leu	Gly	His	Trp	Gly	Ser	Leu	Cys	Asp	Thr	His	915	920	925	
Trp	Asp	Pro	Glu	Asp	Ala	Arg	Val	Leu	Cys	Arg	Gln	Leu	Ser	Cys	Gly	930	935	940	

Thr	Ala	Leu	Ser	Thr	Thr	Gly	Gly	Lys	Tyr	Ile	Gly	Glu	Arg	Ser	Val	945	950	955	960
Arg	Val	Trp	Gly	His	Arg	Phe	His	Cys	Leu	Gly	Asn	Glu	Ser	Leu	Leu	965	970	975	
Asp	Asn	Cys	Gln	Met	Thr	Val	Leu	Gly	Ala	Pro	Pro	Cys	Ile	His	Gly	980	985	990	
Asn	Thr	Val	Ser	Val	Ile	Cys	Thr	Gly	Ser	Leu	Thr	Gln	Pro	Leu	Phe	995	1000	1005	
Pro	Cys	Leu	Ala	Asn	Val	Ser	Asp	Pro	Tyr	Leu	Ser	Ala	Val	Pro	Glu	1010	1015	1020	
Gly	Ser	Ala	Leu	Ile	Cys	Leu	Glu	Asp	Lys	Arg	Leu	Arg	Leu	Val	Asp	1025	1030	1035	1040
Gly	Asp	Ser	Arg	Cys	Ala	Gly	Arg	Val	Glu	Ile	Tyr	His	Asp	Gly	Phe	1045	1050	1055	
Trp	Gly	Thr	Ile	Cys	Asp	Asp	Gly	Trp	Asp	Leu	Ser	Asp	Ala	His	Val	1060	1065	1070	
Val	Cys	Gln	Lys	Leu	Gly	Cys	Gly	Val	Ala	Phe	Asn	Ala	Thr	Val	Ser	1075	1080	1085	
Ala	His	Phe	Gly	Glu	Gly	Ser	Gly	Pro	Ile	Trp	Leu	Asp	Asp	Leu	Asn	1090	1095	1100	
Cys	Thr	Gly	Thr	Glu	Ser	His	Leu	Trp	Gln	Cys	Pro	Ser	Arg	Gly	Trp	1105	1110	1115	1120
Gly	Gln	His	Asp	Cys	Arg	His	Lys	Glu	Asp	Ala	Gly	Val	Ile	Cys	Ser	1125	1130	1135	
Glu	Phe	Thr	Ala	Leu	Arg	Leu	Tyr	Ser	Glu	Thr	Glu	Thr	Glu	Ser	Cys	1140	1145	1150	
Ala	Gly	Arg	Leu	Glu	Val	Phe	Tyr	Asn	Gly	Thr	Trp	Gly	Ser	Val	Gly	1155	1160	1165	
Arg	Arg	Asn	Ile	Thr	Thr	Ala	Ile	Ala	Gly	Ile	Val	Cys	Arg	Gln	Leu	1170	1175	1180	
Gly	Cys	Gly	Glu	Asn	Gly	Val	Val	Ser	Leu	Ala	Pro	Leu	Ser	Lys	Thr	1185	1190	1195	1200

Gly Ser Gly Phe Met Trp Val Asp Asp Ile Gln Cys Pro Lys Thr His	1205	1210	1215
Ile Ser Ile Trp Gln Cys Leu Ser Ala Pro Trp Glu Arg Arg Ile Ser	1220	1225	1230
Ser Pro Ala Glu Glu Thr Trp Ile Thr Cys Glu Asp Arg Ile Arg Val	1235	1240	1245
Arg Gly Gly Asp Thr Glu Cys Ser Gly Arg Val Glu Ile Trp His Ala	1250	1255	1260
Gly Ser Trp Gly Thr Val Cys Asp Asp Ser Trp Asp Leu Ala Glu Ala	1265	1270	1275
Glu Val Val Cys Gln Gln Leu Gly Cys Gly Ser Ala Leu Ala Ala Leu	1285	1290	1295
Arg Asp Ala Ser Phe Gly Gln Gly Thr Gly Thr Ile Trp Leu Asp Asp	1300	1305	1310
Met Arg Cys Lys Gly Asn Glu Ser Phe Leu Trp Asp Cys His Ala Lys	1315	1320	1325
Pro Trp Gly Gln Ser Asp Cys Gly His Lys Glu Asp Ala Gly Val Arg	1330	1335	1340
Cys Ser Gly Gln Ser Leu Lys Ser Leu Asn Ala Ser Ser Gly His Leu	1345	1350	1355
Ala Leu Ile Leu Ser Ser Ile Phe Gly Leu Leu Leu Leu Val Leu Phe	1365	1370	1375
Ile Leu Phe Leu Thr Trp Cys Arg Val Gln Lys Gln Lys His Leu Pro	1380	1385	1390
Leu Arg Val Ser Thr Arg Arg Arg Gly Ser Leu Glu Glu Asn Leu Phe	1395	1400	1405
His Glu Met Glu Thr Cys Leu Lys Arg Glu Asp Pro His Gly Thr Arg	1410	1415	1420
Thr Ser Asp Asp Thr Pro Asn His Gly Cys Glu Asp Ala Ser Asp Thr	1425	1430	1435
Ser Leu Leu Gly Val Leu Pro Ala Ser Glu Ala Thr Lys	1445	1450	

<210> 382  
 <211> 40  
 <212> PRT  
 <213> Homo sapiens

<400> 382  
 Met Met Leu Pro Gln Asn Ser Trp His Ile Asp Phe Gly Arg Cys Cys  
           1                  5                  10                  15  
 Cys His Gln Asn Leu Phe Ser Ala Val Val Thr Cys Ile Leu Leu Leu  
                   20                  25                  30  
 Asn Ser Cys Phe Leu Ile Ser Ser  
           35                  40

<210> 383  
 <211> 1413  
 <212> PRT  
 <213> Homo sapiens

<400> 383  
 Phe Asn Gly Thr Asp Leu Glu Leu Arg Leu Val Asn Gly Asp Gly Pro  
           1                  5                  10                  15  
 Cys Ser Gly Thr Val Glu Val Lys Phe Gln Gly Gln Trp Gly Thr Val  
                   20                  25                  30  
 Cys Asp Asp Gly Trp Asn Thr Thr Ala Ser Thr Val Val Cys Lys Gln  
           35                  40                  45  
 Leu Gly Cys Pro Phe Ser Phe Ala Met Phe Arg Phe Gly Gln Ala Val  
           50                  55                  60  
 Thr Arg His Gly Lys Ile Trp Leu Asp Asp Val Ser Cys Tyr Gly Asn  
           65                  70                  75                  80  
 Glu Ser Ala Leu Trp Glu Cys Gln His Arg Glu Trp Gly Ser His Asn  
                   85                  90                  95  
 Cys Tyr His Gly Glu Asp Val Gly Val Asn Cys Tyr Gly Glu Ala Asn  
           100                  105                  110  
 Leu Gly Leu Arg Leu Val Asp Gly Asn Asn Ser Cys Ser Gly Arg Val  
           115                  120                  125  
 Glu Val Lys Phe Gln Glu Arg Trp Gly Thr Ile Cys Asp Asp Gly Trp





385		390		395		400
Asn Glu Ser Ala Leu Trp Asp Cys Thr Tyr Asp Gly Lys Ala Lys Arg						
	405		410		415	
Thr Cys Phe Arg Arg Ser Asp Ala Gly Val Ile Cys Ser Asp Lys Ala						
	420		425		430	
Asp Leu Asp Leu Arg Leu Val Gly Ala His Ser Pro Cys Tyr Gly Arg						
	435		440		445	
Leu Glu Val Lys Tyr Gln Gly Glu Trp Gly Thr Val Cys His Asp Arg						
	450		455		460	
Trp Ser Thr Arg Asn Ala Ala Val Val Cys Lys Gln Leu Gly Cys Gly						
	465		470		475	
Lys Pro Met His Val Phe Gly Met Thr Tyr Phe Lys Glu Ala Ser Gly						
	485		490		495	
Pro Ile Trp Leu Asp Asp Val Ser Cys Ile Gly Asn Glu Ser Asn Ile						
	500		505		510	
Trp Asp Cys Glu His Ser Gly Trp Gly Lys His Asn Cys Val His Arg						
	515		520		525	
Glu Asp Val Ile Val Thr Cys Ser Gly Asp Ala Thr Trp Gly Leu Arg						
	530		535		540	
Leu Val Gly Gly Ser Asn Arg Cys Ser Gly Arg Leu Glu Val Tyr Phe						
	545		550		555	
Gln Gly Arg Trp Gly Thr Val Cys Asp Asp Gly Trp Asn Ser Lys Ala						
	565		570		575	
Ala Ala Val Val Cys Ser Gln Leu Asp Cys Pro Ser Ser Ile Ile Gly						
	580		585		590	
Met Gly Leu Gly Asn Ala Ser Thr Gly Tyr Gly Lys Ile Trp Leu Asp						
	595		600		605	
Asp Val Ser Cys Asp Gly Asp Glu Ser Asp Leu Trp Ser Cys Arg Asn						
	610		615		620	
Ser Gly Trp Gly Asn Asn Asp Cys Ser His Ser Glu Asp Val Gly Val						
	625		630		635	
Ile Cys Ser Asp Ala Ser Asp Met Glu Leu Arg Leu Val Gly Gly Ser						

	645		650		655
Ser Arg Cys Ala Gly Lys Val Glu Val Asn Val Gln Gly Ala Val Gly					
	660		665		670
Ile Leu Cys Ala Asn Gly Trp Gly Met Asn Ile Ala Glu Val Val Cys					
	675		680		685
Arg Gln Leu Glu Cys Gly Ser Ala Ile Arg Val Ser Arg Glu Pro His					
	690		695		700
Phe Thr Glu Arg Thr Leu His Ile Leu Met Ser Asn Ser Gly Cys Thr					
	705		710		715
					720
Gly Gly Glu Ala Ser Leu Trp Asp Cys Ile Arg Trp Glu Trp Lys Gln					
	725		730		735
Thr Ala Cys His Leu Asn Met Glu Ala Ser Leu Ile Cys Ser Ala His					
	740		745		750
Arg Gln Pro Arg Leu Val Gly Ala Asp Met Pro Cys Ser Gly Arg Val					
	755		760		765
Glu Val Lys His Ala Asp Thr Trp Arg Ser Val Cys Asp Ser Asp Phe					
	770		775		780
Ser Leu His Ala Ala Asn Val Leu Cys Arg Glu Leu Asn Cys Gly Asp					
	785		790		795
					800
Ala Ile Ser Leu Ser Val Gly Asp His Phe Gly Lys Gly Asn Gly Leu					
	805		810		815
Thr Trp Ala Glu Lys Phe Gln Cys Glu Gly Ser Glu Thr His Leu Ala					
	820		825		830
Leu Cys Pro Ile Val Gln His Pro Glu Asp Thr Cys Ile His Ser Arg					
	835		840		845
Glu Val Gly Val Val Cys Ser Arg Tyr Thr Asp Val Arg Leu Val Asn					
	850		855		860
Gly Lys Ser Gln Cys Asp Gly Gln Val Glu Ile Asn Val Leu Gly His					
	865		870		875
					880
Trp Gly Ser Leu Cys Asp Thr His Trp Asp Pro Glu Asp Ala Arg Val					
	885		890		895
Leu Cys Arg Gln Leu Ser Cys Gly Thr Ala Leu Ser Thr Thr Gly Gly					



Asp Ile Gln Cys Pro Lys Thr His Ile Ser Ile Trp Gln Cys Leu Ser		
1170	1175	1180
Ala Pro Trp Glu Arg Arg Ile Ser Ser Pro Ala Glu Glu Thr Trp Ile		
1185	1190	1195 1200
Thr Cys Glu Asp Arg Ile Arg Val Arg Gly Gly Asp Thr Glu Cys Ser		
	1205	1210 1215
Gly Arg Val Glu Ile Trp His Ala Gly Ser Trp Gly Thr Val Cys Asp		
	1220	1225 1230
Asp Ser Trp Asp Leu Ala Glu Ala Glu Val Val Cys Gln Gln Leu Gly		
	1235	1240 1245
Cys Gly Ser Ala Leu Ala Ala Leu Arg Asp Ala Ser Phe Gly Gln Gly		
	1250	1255 1260
Thr Gly Thr Ile Trp Leu Asp Asp Met Arg Cys Lys Gly Asn Glu Ser		
	1265	1270 1275 1280
Phe Leu Trp Asp Cys His Ala Lys Pro Trp Gly Gln Ser Asp Cys Gly		
	1285	1290 1295
His Lys Glu Asp Ala Gly Val Arg Cys Ser Gly Gln Ser Leu Lys Ser		
	1300	1305 1310
Leu Asn Ala Ser Ser Gly His Leu Ala Leu Ile Leu Ser Ser Ile Phe		
	1315	1320 1325
Gly Leu Leu Leu Leu Val Leu Phe Ile Leu Phe Leu Thr Trp Cys Arg		
	1330	1335 1340
Val Gln Lys Gln Lys His Leu Pro Leu Arg Val Ser Thr Arg Arg Arg		
	1345	1350 1355 1360
Gly Ser Leu Glu Glu Asn Leu Phe His Glu Met Glu Thr Cys Leu Lys		
	1365	1370 1375
Arg Glu Asp Pro His Gly Thr Arg Thr Ser Asp Asp Thr Pro Asn His		
	1380	1385 1390
Gly Cys Glu Asp Ala Ser Asp Thr Ser Leu Leu Gly Val Leu Pro Ala		
	1395	1400 1405
Ser Glu Ala Thr Lys		

1410

<210> 384  
<211> 1319  
<212> PRT  
<213> Homo sapiens

<400> 384

Phe Asn Gly Thr Asp Leu Glu Leu Arg Leu Val Asn Gly Asp Gly Pro  
1 5 10 15

Cys Ser Gly Thr Val Glu Val Lys Phe Gln Gly Gln Trp Gly Thr Val  
20 25 30

Cys Asp Asp Gly Trp Asn Thr Thr Ala Ser Thr Val Val Cys Lys Gln  
35 40 45

Leu Gly Cys Pro Phe Ser Phe Ala Met Phe Arg Phe Gly Gln Ala Val  
50 55 60

Thr Arg His Gly Lys Ile Trp Leu Asp Asp Val Ser Cys Tyr Gly Asn  
65 70 75 80

Glu Ser Ala Leu Trp Glu Cys Gln His Arg Glu Trp Gly Ser His Asn  
85 90 95

Cys Tyr His Gly Glu Asp Val Gly Val Asn Cys Tyr Gly Glu Ala Asn  
100 105 110

Leu Gly Leu Arg Leu Val Asp Gly Asn Asn Ser Cys Ser Gly Arg Val  
115 120 125

Glu Val Lys Phe Gln Glu Arg Trp Gly Thr Ile Cys Asp Asp Gly Trp  
130 135 140

Asn Leu Asn Thr Ala Ala Val Val Cys Arg Gln Leu Gly Cys Pro Ser  
145 150 155 160

Ser Phe Ile Ser Ser Gly Val Val Asn Ser Pro Ala Val Leu Arg Pro  
165 170 175

Ile Trp Leu Asp Asp Ile Leu Cys Gln Gly Asn Glu Leu Ala Leu Trp  
180 185 190

Asn Cys Arg His Arg Gly Trp Gly Asn His Asp Cys Ser His Asn Glu  
195 200 205

Asp Val Thr Leu Thr Cys Tyr Asp Ser Ser Asp Leu Glu Leu Arg Leu  
210 215 220

Val Gly Gly Thr Asn Arg Cys Met Gly Arg Val Glu Leu Lys Ile Gln  
225 230 235 240

Gly Arg Trp Gly Thr Val Cys His His Lys Trp Asn Asn Ala Ala Ala  
245 250 255

Asp Val Val Cys Lys Gln Leu Gly Cys Gly Thr Ala Leu His Phe Ala  
260 265 270

Gly Leu Pro His Leu Gln Ser Gly Ser Asp Val Val Trp Leu Asp Gly  
275 280 285

Val Ser Cys Ser Gly Asn Glu Ser Phe Leu Trp Asp Cys Arg His Ser  
290 295 300

Gly Thr Val Asn Phe Asp Cys Leu His Gln Asn Asp Val Ser Val Ile  
305 310 315 320

Cys Ser Asp Gly Ala Asp Leu Glu Leu Arg Leu Ala Asp Gly Ser Asn  
325 330 335

Asn Cys Ser Gly Arg Val Glu Val Arg Ile His Glu Gln Trp Trp Thr  
340 345 350

Ile Cys Asp Gln Asn Trp Lys Asn Glu Gln Ala Leu Val Val Cys Lys  
355 360 365

Gln Leu Gly Cys Pro Phe Ser Val Phe Gly Ser Arg Arg Ala Lys Pro  
370 375 380

Ser Asn Glu Ala Arg Asp Ile Trp Ile Asn Ser Ile Ser Cys Thr Gly  
385 390 395 400

Asn Glu Ser Ala Leu Trp Asp Cys Thr Tyr Asp Gly Lys Ala Lys Arg  
405 410 415

Thr Cys Phe Arg Arg Ser Asp Ala Gly Val Ile Cys Ser Asp Lys Ala  
420 425 430

Asp Leu Asp Leu Arg Leu Val Gly Ala His Ser Pro Cys Tyr Gly Arg  
435 440 445

Leu Glu Val Lys Tyr Gln Gly Glu Trp Gly Thr Val Cys His Asp Arg  
450 455 460

Trp Ser Thr Arg Asn Ala Ala Val Val Cys Lys Gln Leu Gly Cys Gly  
465 470 475 480

Lys Pro Met His Val Phe Gly Met Thr Tyr Phe Lys Glu Ala Ser Gly  
485 490 495

Pro Ile Trp Leu Asp Asp Val Ser Cys Ile Gly Asn Glu Ser Asn Ile  
500 505 510

Trp Asp Cys Glu His Ser Gly Trp Gly Lys His Asn Cys Val His Arg  
515 520 525

Glu Asp Val Ile Val Thr Cys Ser Gly Asp Ala Thr Trp Gly Leu Arg  
530 535 540

Leu Val Gly Gly Ser Asn Arg Cys Ser Gly Arg Leu Glu Val Tyr Phe  
545 550 555 560

Gln Gly Arg Trp Gly Thr Val Cys Asp Asp Gly Trp Asn Ser Lys Ala  
565 570 575

Ala Ala Val Val Cys Ser Gln Leu Asp Cys Pro Ser Ser Ile Ile Gly  
580 585 590

Met Gly Leu Gly Asn Ala Ser Thr Gly Tyr Gly Lys Ile Trp Leu Asp  
595 600 605

Asp Val Ser Cys Asp Gly Asp Glu Ser Asp Leu Trp Ser Cys Arg Asn  
610 615 620

Ser Gly Trp Gly Asn Asn Asp Cys Ser His Ser Glu Asp Val Gly Val  
625 630 635 640

Ile Cys Ser Asp Ala Ser Asp Met Glu Leu Arg Leu Val Gly Gly Ser  
645 650 655

Ser Arg Cys Ala Gly Lys Val Glu Val Asn Val Gln Gly Ala Val Gly  
660 665 670

Ile Leu Cys Ala Asn Gly Trp Gly Met Asn Ile Ala Glu Val Val Cys  
675 680 685

Arg Gln Leu Glu Cys Gly Ser Ala Ile Arg Val Ser Arg Glu Pro His  
690 695 700

Phe Thr Glu Arg Thr Leu His Ile Leu Met Ser Asn Ser Gly Cys Thr  
705 710 715 720

Gly Gly Glu Ala Ser Leu Trp Asp Cys Ile Arg Trp Glu Trp Lys Gln  
 725 730 735

Thr Ala Cys His Leu Asn Met Glu Ala Ser Leu Ile Cys Ser Ala His  
 740 745 750

Arg Gln Pro Arg Leu Val Gly Ala Asp Met Pro Cys Ser Gly Arg Val  
 755 760 765

Glu Val Lys His Ala Asp Thr Trp Arg Ser Val Cys Asp Ser Asp Phe  
 770 775 780

Ser Leu His Ala Ala Asn Val Leu Cys Arg Glu Leu Asn Cys Gly Asp  
 785 790 795 800

Ala Ile Ser Leu Ser Val Gly Asp His Phe Gly Lys Gly Asn Gly Leu  
 805 810 815

Thr Trp Ala Glu Lys Phe Gln Cys Glu Gly Ser Glu Thr His Leu Ala  
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Leu Cys Pro Ile Val Gln His Pro Glu Asp Thr Cys Ile His Ser Arg  
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Glu Val Gly Val Val Cys Ser Arg Tyr Thr Asp Val Arg Leu Val Asn  
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Gly Lys Ser Gln Cys Asp Gly Gln Val Glu Ile Asn Val Leu Gly His  
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Trp Gly Ser Leu Cys Asp Thr His Trp Asp Pro Glu Asp Ala Arg Val  
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Leu Cys Arg Gln Leu Ser Cys Gly Thr Ala Leu Ser Thr Thr Gly Gly  
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Lys Tyr Ile Gly Glu Arg Ser Val Arg Val Trp Gly His Arg Phe His  
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Cys Leu Gly Asn Glu Ser Leu Leu Asp Asn Cys Gln Met Thr Val Leu  
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Gly Ala Pro Pro Cys Ile His Gly Asn Thr Val Ser Val Ile Cys Thr  
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Gly Ser Leu Thr Gln Pro Leu Phe Pro Cys Leu Ala Asn Val Ser Asp  
 965 970 975



Pro Tyr Leu Ser Ala Val Pro Glu Gly Ser Ala Leu Ile Cys Leu Glu  
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Asp Lys Arg Leu Arg Leu Val Asp Gly Asp Ser Arg Cys Ala Gly Arg  
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Val Glu Ile Tyr His Asp Gly Phe Trp Gly Thr Ile Cys Asp Asp Gly  
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Trp Asp Leu Ser Asp Ala His Val Val Cys Gln Lys Leu Gly Cys Gly  
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Val Ala Phe Asn Ala Thr Val Ser Ala His Phe Gly Glu Gly Ser Gly  
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Pro Ile Trp Leu Asp Asp Leu Asn Cys Thr Gly Thr Glu Ser His Leu  
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Glu Asp Ala Gly Val Ile Cys Ser Glu Phe Thr Ala Leu Arg Leu Tyr  
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Asn Gly Thr Trp Gly Ser Val Gly Arg Arg Asn Ile Thr Thr Ala Ile  
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Asp Ile Gln Cys Pro Lys Thr His Ile Ser Ile Trp Gln Cys Leu Ser  
 1170 1175 1180

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Asp Ser Trp Asp Leu Ala Glu Ala Glu Val Val Cys Gln Gln Leu Gly  
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Phe Leu Trp Asp Cys His Ala Lys Pro Trp Gly Gln Ser Asp Cys Gly  
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<212> PRT

<213> Homo sapiens

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&lt;211&gt; 3104

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 387

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<212> DNA

<213> Homo sapiens

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<212> PRT

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Gly Gly Gly Gln Gly Pro Met Pro Arg Val Arg Tyr Tyr Ala Gly Asp  
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Glu Arg Arg Ala Leu Ser Phe Phe His Gln Lys Gly Leu Gln Asp Phe  
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Asp Thr Leu Leu Leu Ser Gly Asp Gly Asn Thr Leu Tyr Val Gly Ala  
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Arg Glu Ala Ile Leu Ala Leu Asp Ile Gln Asp Pro Gly Val Pro Arg  
 85 90 95

Leu Lys Asn Met Ile Pro Trp Pro Ala Ser Asp Arg Lys Lys Ser Glu  
 100 105 110

Cys Ala Phe Lys Lys Lys Ser Asn Glu Thr Gln Cys Phe Asn Phe Ile  
 115 120 125

Arg Val Leu Val Ser Tyr Asn Val Thr His Leu Tyr Thr Cys Gly Thr

Phe Ala Phe Ser Pro Ala Cys Thr Phe Ile Glu Leu Gln Asp Ser Tyr  
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 Pro Phe Asp Pro Ala His Lys His Thr Ala Val Leu Val Asp Gly Met  
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 Leu Tyr Ser Gly Thr Met Asn Asn Phe Leu Gly Ser Glu Pro Ile Leu  
 195 200 205  
 Met Arg Thr Leu Gly Ser Gln Pro Val Leu Lys Thr Asp Asn Phe Leu  
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 Arg Trp Leu His His Asp Ala Ser Phe Val Ala Ala Ile Pro Ser Thr  
 225 230 235 240  
 Gln Val Val Tyr Phe Phe Phe Glu Glu Thr Ala Ser Glu Phe Asp Phe  
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 Phe Glu Arg Leu His Thr Ser Arg Val Ala Arg Val Cys Lys Asn Asp  
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 Val Gly Gly Glu Lys Leu Leu Gln Lys Lys Trp Thr Thr Phe Leu Lys  
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 Ala Gln Leu Leu Cys Thr Gln Pro Gly Gln Leu Pro Phe Asn Val Ile  
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 Arg His Ala Val Leu Leu Pro Ala Asp Ser Pro Thr Ala Pro His Ile  
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 Tyr Ala Val Phe Thr Ser Gln Trp Gln Val Gly Gly Thr Arg Ser Ser  
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 Ala Val Cys Ala Phe Ser Leu Leu Asp Ile Glu Arg Val Phe Lys Gly  
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 Lys Tyr Lys Glu Leu Asn Lys Glu Thr Ser Arg Trp Thr Thr Tyr Arg  
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 Gly Pro Glu Thr Asn Pro Arg Pro Gly Ser Cys Ser Val Gly Pro Ser  
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 Ser Asp Lys Ala Leu Thr Phe Met Lys Asp His Phe Leu Met Asp Glu













Phe Asp Thr Leu Leu Leu Ser Gly Asp Gly Asn Thr Leu Tyr Val Gly  
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Ala Arg Glu Ala Ile Leu Ala Leu Asp Ile Gln Asp Pro Gly Val Pro  
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Arg Leu Lys Asn Met Ile Pro Trp Pro Ala Ser Asp Arg Lys Lys Ser  
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Glu Cys Ala Phe Lys Lys Lys Ser Asn Glu Thr Gln Cys Phe Asn Phe  
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Ile Arg Val Leu Val Ser Tyr Asn Val Thr His Leu Tyr Thr Cys Gly  
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Thr Phe Ala Phe Ser Pro Ala Cys Thr Phe Ile Glu Leu Gln Asp Ser  
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Tyr Leu Leu Pro Ile Ser Glu Asp Lys Val Met Glu Gly Lys Gly Gln  
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Ser Pro Phe Asp Pro Ala His Lys His Thr Ala Val Leu Val Asp Gly  
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Lys Ala Gln Leu Leu Cys Thr Gln Pro Gly Gln Leu Pro Phe Asn Val  
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<210> 405

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<212> PRT

<213> Homo sapiens

<400> 405

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Arg Ile Thr Gln Arg Ala Leu Asp Tyr Gly Val Gln Ala Gly Met Lys
      35                      40                      45

Met Ile Glu Gln Met Leu Lys Glu Lys Lys Leu Pro Asp Leu Ser Gly
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Ser Glu Ser Leu Glu Phe Leu Lys Val Asp Tyr Val Asn Tyr Asn Phe
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Ser Asn Ile Lys Ile Ser Ala Phe Ser Phe Pro Asn Thr Ser Leu Ala
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Phe Val Pro Gly Val Gly Ile Lys Ala Leu Thr Asn His Gly Thr Ala  
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Asn Ile Ser Thr Asp Trp Gly Phe Glu Ser Pro Leu Phe Val Leu Tyr  
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Asn Ser Phe Ala Glu Pro Met Glu Lys Pro Ile Leu Lys Asn Leu Asn  
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Glu Met Leu Cys Pro Ile Ile Ala Ser Glu Val Lys Ala Leu Asn Ala  
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Asn Leu Ser Thr Leu Glu Val Leu Thr Lys Ile Asp Asn Tyr Thr Leu  
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Leu Asp Tyr Ser Leu Ile Ser Ser Pro Glu Ile Thr Glu Asn Tyr Leu  
 180 185 190

Asp Leu Asn Leu Lys Gly Val Phe Tyr Pro Leu Glu Asn Leu Thr Asp  
 195 200 205

Pro Pro Phe Ser Pro Val Pro Phe Val Leu Pro Glu Arg Ser Asn Ser  
 210 215 220

Met Leu Tyr Ile Gly Ile Ala Glu Tyr Phe Phe Lys Ser Ala Ser Phe  
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Ala His Phe Thr Ala Gly Val Phe Asn Leu Thr Leu Ser Thr Glu Glu  
 245 250 255

Ile Ser Asn His Phe Val Gln Asn Ser Gln Gly Leu Gly Asn Val Leu  
 260 265 270

Ser Arg Ile Ala Glu Ile Tyr Ile Leu Ser Gln Pro Phe Met Val Arg  
 275 280 285

Ile Met Ala Thr Glu Pro Pro Ile Ile Asn Leu Gln Pro Gly Asn Phe  
 290 295 300

Thr Leu Asp Ile Pro Ala Ser Ile Met Met Leu Thr Gln Pro Lys Asn  
 305 310 315 320

Ser Thr Val Glu Thr Ile Val Ser Met Asp Phe Val Ala Ser Thr Ser  
 325 330 335

Val Gly Leu Val Ile Leu Gly Gln Arg Leu Val Cys Ser Leu Ser Leu  
 340 345 350

Asn Arg Phe Arg Leu Ala Leu Pro Glu Ser Asn Arg Ser Asn Ile Glu  
 355 360 365

Val Leu Arg Phe Glu Asn Ile Leu Ser Ser Ile Leu His Phe Gly Val  
 370 375 380

Leu Pro Leu Ala Asn Ala Lys Leu Gln Gln Gly Phe Pro Leu Pro Asn  
 385 390 395 400

Pro His Lys Phe Leu Phe Val Asn Ser Asp Ile Glu Val Leu Glu Gly  
 405 410 415

Phe Leu Leu Ile Ser Thr Asp Leu Lys Tyr Glu Thr Ser Ser Lys Gln  
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Gln Pro Ser Phe His Val Trp Glu Gly Leu Asn Leu Ile Ser Arg Gln  
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Trp Arg Gly Lys Ser Ala Pro  
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<210> 406

<211> 23

<212> PRT

<213> Homo sapiens

<400> 406

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Asn Leu Tyr Val Ser Ser Ser  
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<210> 407

<211> 432

<212> PRT

<213> Homo sapiens

<400> 407

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Asp Tyr Gly Val Gln Ala Gly Met Lys Met Ile Glu Gln Met Leu Lys  
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Glu Lys Lys Leu Pro Asp Leu Ser Gly Ser Glu Ser Leu Glu Phe Leu



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Ser Met Asp Phe Val Ala Ser Thr Ser Val Gly Leu Val Ile Leu Gly				
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Gln Arg Leu Val Cys Ser Leu Ser Leu Asn Arg Phe Arg Leu Ala Leu				
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Pro Glu Ser Asn Arg Ser Asn Ile Glu Val Leu Arg Phe Glu Asn Ile				
	340		345	350
Leu Ser Ser Ile Leu His Phe Gly Val Leu Pro Leu Ala Asn Ala Lys				
	355		360	365
Leu Gln Gln Gly Phe Pro Leu Pro Asn Pro His Lys Phe Leu Phe Val				
	370		375	380
Asn Ser Asp Ile Glu Val Leu Glu Gly Phe Leu Leu Ile Ser Thr Asp				
385		390		395 400
Leu Lys Tyr Glu Thr Ser Ser Lys Gln Gln Pro Ser Phe His Val Trp				
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Glu Gly Leu Asn Leu Ile Ser Arg Gln Trp Arg Gly Lys Ser Ala Pro				
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<212> PRT				
<213> Homo sapiens				
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Val Val Arg Ile Ser Gln Lys Gly Leu Asp Tyr Ala Ser Gln Gln Gly				
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Thr Ala Ala Leu Gln Lys Glu Leu Lys Arg Ile Lys Ile Pro Asp Tyr				
	50		55	60



Thr Thr Lys Phe Phe Gly Thr Phe Leu Pro Glu Val Ala Lys Lys Phe  
 325 330 335

Pro Asn Met Lys Ile Gln Ile His Val Ser Ala Ser Thr Pro Pro His  
 340 345 350

Leu Ser Val Gln Pro Thr Gly Leu Thr Phe Tyr Pro Ala Val Asp Val  
 355 360 365

Gln Ala Phe Ala Val Leu Pro Asn Ser Ser Leu Ala Ser Leu Phe Leu  
 370 375 380

Ile Gly Met His Thr Thr Gly Ser Met Glu Val Ser Ala Glu Ser Asn  
 385 390 395 400

Arg Leu Val Gly Glu Leu Lys Leu Asp Arg Leu Leu Leu Glu Leu Lys  
 405 410 415

His Ser Asn Ile Gly Pro Phe Pro Val Glu Leu Leu Gln Asp Ile Met  
 420 425 430

Asn Tyr Ile Val Pro Ile Leu Val Leu Pro Arg Val Asn Glu Lys Leu  
 435 440 445

Gln Lys Gly Phe Pro Leu Pro Thr Pro Ala Arg Val Gln Leu Tyr Asn  
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Val Val Leu Gln Pro His Gln Asn Phe Leu Leu Phe Gly Ala Asp Val  
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Val Tyr Lys

<210> 409

<211> 481

<212> PRT

<213> Homo sapiens

<400> 409

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Leu Thr Ser Thr Pro Glu Ala Leu Gly Ala Asn Pro Gly Leu Val Ala  
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Arg Ile Thr Asp Lys Gly Leu Gln Tyr Ala Ala Gln Glu Gly Leu Leu  
 35 40 45





Leu Arg Asp Asp Met Ile Pro Lys Glu Ser Lys Phe Arg Leu Thr Thr  
 305 310 315 320

Lys Phe Phe Gly Thr Phe Leu Pro Glu Val Ala Lys Lys Phe Pro Asn  
 325 330 335

Met Lys Ile Gln Ile His Val Ser Ala Ser Thr Pro Pro His Leu Ser  
 340 345 350

Val Gln Pro Thr Gly Leu Thr Phe Tyr Pro Ala Val Asp Val Gln Ala  
 355 360 365

Leu Ala Val Leu Pro Asn Ser Ser Leu Ala Ser Leu Phe Leu Ile Gly  
 370 375 380

Met His Thr Thr Gly Ser Met Glu Val Ser Ala Glu Ser Asn Arg Leu  
 385 390 395 400

Val Gly Glu Leu Lys Leu Asp Arg Leu Leu Leu Glu Leu Lys His Ser  
 405 410 415

Asn Ile Gly Pro Phe Pro Val Glu Leu Leu Gln Asp Ile Met Asn Tyr  
 420 425 430

Ile Val Pro Ile Leu Val Leu Pro Arg Val Asn Glu Lys Leu Gln Lys  
 435 440 445

Gly Phe Pro Leu Pro Thr Pro Ala Arg Val Gln Leu Tyr Asn Val Val  
 450 455 460

Leu Gln Pro His Gln Asn Phe Leu Leu Phe Gly Ala Asp Val Val Tyr  
 465 470 475 480

Lys

<210> 410

<211> 383

<212> PRT

<213> Homo sapiens

<400> 410

Met Arg Ile Ala His Ala Ser Ser Arg Gly Asn Ile Ser Ile Phe Ser  
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Val Phe Leu Ile Pro Leu Ile Ala Tyr Ile Leu Ile Leu Pro Gly Val



0025130102400

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Val	Gln	Ile	Gly	Ala	Tyr	Gly	Thr	Asn	Thr	Thr	Asn	Ser	Ser	Arg	Asp
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Lys	Asn	Asp	Ile	Ser	Ser	Asp	Lys	Thr	Ala	Gly	Ser	Ser	Gly	Phe	Gln
				325					330					335	
Ser	Arg	Thr	Ser	Thr	Cys	Gln	Ser	Ser	Ala	Ser	Ser	Ala	Ser	Leu	Arg
			340					345					350		
Ser	Gln	Ser	Ser	Ile	Glu	Thr	Val	His	Asp	Glu	Ala	Glu	Leu	Glu	Arg
	355						360					365			
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<213> Homo sapiens															
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65					70					75					80
Val	Val	Phe	Leu	Gln	His	Gly	Leu	Leu	Ala	Asp	Ser	Ser	Asn	Trp	Val
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Thr	Asn	Leu	Ala	Asn	Ser	Ser	Leu	Gly	Phe	Ile	Leu	Ala	Asp	Ala	Gly
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Phe Asp Val Trp Met Gly Asn Ser Arg Gly Asn Thr Trp Ser Arg Lys  
 115 120 125

His Lys Thr Leu Ser Val Ser Gln Asp Glu Phe Trp Ala Phe Ser Tyr  
 130 135 140

Asp Glu Met Ala Lys Tyr Asp Leu Pro Ala Ser Ile Asn Phe Ile Leu  
 145 150 155 160

Asn Lys Thr Gly Gln Glu Gln Val Tyr Tyr Val Gly His Ser Gln Gly  
 165 170 175

Thr Thr Ile Gly Phe Ile Ala Phe Ser Gln Ile Pro Glu Leu Ala Lys  
 180 185 190

Arg Ile Lys Met Phe Phe Ala Leu Gly Pro Val Ala Ser Val Ala Phe  
 195 200 205

Cys Thr Ser Pro Met Ala Lys Leu Gly Arg Leu Pro Asp His Leu Ile  
 210 215 220

Lys Asp Leu Phe Gly Asp Lys Glu Phe Leu Pro Gln Ser Ala Phe Leu  
 225 230 235 240

Lys Trp Leu Gly Thr His Val Cys Thr His Val Ile Leu Lys Glu Leu  
 245 250 255

Cys Gly Asn Leu Cys Phe Leu Leu Cys Gly Phe Asn Glu Arg Asn Leu  
 260 265 270

Asn Met Ser Arg Val Asp Val Tyr Thr Thr His Ser Pro Ala Gly Thr  
 275 280 285

Ser Val Gln Asn Met Leu His Trp Ser Gln Ala Val Lys Phe Gln Lys  
 290 295 300

Phe Gln Ala Phe Asp Trp Gly Ser Ser Ala Lys Asn Tyr Phe His Tyr  
 305 310 315 320

Asn Gln Ser Tyr Pro Pro Thr Tyr Asn Val Lys Asp Met Leu Val Pro  
 325 330 335

Thr Ala Val Trp Ser Gly Gly His Asp Trp Leu Ala Asp Val Tyr Asp  
 340 345 350

Val Asn Ile Leu Leu Thr Gln Ile Thr Asn Leu Val Phe His Glu Ser  
 355 360 365





370

375

380

Ser Gln Gln Leu Ser Gln Arg Phe Phe Cys Met Ser His Leu Asn Leu  
 385 390 395 400

Ile Glu Ser Leu His Gln Glu Thr Leu Gly Thr Val Val Ser Leu Gly  
 405 410 415

Leu Leu Glu Ile Ser Gly Pro Phe Ser Met Asn Leu Pro Leu Gln Ser  
 420 425 430

Pro Ser Leu Arg Arg Ser Ser Arg Val Arg Val Asn Lys Met Thr Ala  
 435 440 445

Ile Pro Ser  
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<210> 414

<211> 150

<212> PRT

<213> Homo sapiens

<400> 414

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 20 25 30

Leu Ser Ile Gln Arg Leu Trp Tyr Phe Trp Phe Leu Leu Met Met Gly  
 35 40 45

Val Leu Phe Cys Cys Gly Ala Gly Phe Phe Ile Arg Arg Arg Met Tyr  
 50 55 60

Pro Pro Pro Leu Ile Glu Glu Pro Thr Phe Asn Val Ser Tyr Thr Arg  
 65 70 75 80

Gln Pro Pro Asn Pro Ala Pro Gly Ala Gln Gln Met Gly Pro Pro Tyr  
 85 90 95

Tyr Thr Asp Pro Gly Gly Pro Gly Met Asn Pro Val Gly Asn Thr Met  
 100 105 110

Ala Met Ala Phe Gln Val Gln Pro Asn Ser Pro His Gly Gly Thr Thr  
 115 120 125





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 <212> DNA  
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<210> 417  
 <211> 423  
 <212> PRT  
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 20 25 30  
 Ser Val His Met Pro Thr Lys Ala Val Asp Pro Glu Ala Phe Met Asn  
 35 40 45  
 Ile Ser Glu Ile Ile Gln His Gln Gly Tyr Pro Cys Glu Glu Tyr Glu



305 310 315 320

Asp Trp Gly Ser Glu Thr Lys Asn Leu Glu Lys Cys Asn Gln Pro Thr  
325 330 335

Pro Val Arg Tyr Arg Val Arg Asp Met Thr Val Pro Thr Ala Met Trp  
340 345 350

Thr Gly Gly Gln Asp Trp Leu Ser Asn Pro Glu Asp Val Lys Met Leu  
355 360 365

Leu Ser Glu Val Thr Asn Leu Ile Tyr His Lys Asn Ile Pro Glu Trp  
370 375 380

Ala His Val Asp Phe Ile Trp Gly Leu Asp Ala Pro His Arg Met Tyr  
385 390 395 400

Asn Glu Ile Ile His Leu Met Gln Gln Glu Glu Thr Asn Leu Ser Gln  
405 410 415

Gly Arg Cys Glu Ala Val Leu  
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<210> 418

<211> 33

<212> PRT

<213> Homo sapiens

<400> 418

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Ser

<210> 419

<211> 390

<212> PRT

<213> Homo sapiens

<400> 419

Val His Met Pro Thr Lys Ala Val Asp Pro Glu Ala Phe Met Asn Ile  
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 Val Asn Ser Gly Glu Leu Arg Ala Phe Asp Trp Gly Ser Glu Thr Lys  
 35 40 45  
 Asn Leu Glu Lys Cys Asn Gln Pro Thr Pro Val Arg Tyr Arg Val Arg  
 50 55 60  
 Asp Met Thr Val Pro Thr Ala Met Trp Thr Gly Gly Gln Asp Trp Leu  
 65 70 75 80  
 Ser Asn Pro Glu Asp Val Lys Met Leu Leu Ser Glu Val Thr Asn Leu  
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 Ile Tyr His Lys Asn Ile Pro Glu Trp Ala His Val Asp Phe Ile Trp  
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 Gly Leu Asp Ala Pro His Arg Met Tyr Asn Glu Ile Ile His Leu Met  
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<210> 423

<211> 2133

<212> DNA

<213> Homo sapiens

<400> 423

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<210> 424

<211> 1029

<212> DNA

<213> Homo sapiens

<400> 424

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<212> PRT

<213> Homo sapiens

<400> 425

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Thr Ala Leu Ala Thr Phe Ile Val Ile Leu Pro Gly Ile Arg Gly Lys  
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Thr Arg Leu Phe Trp Leu Leu Arg Val Val Thr Ser Leu Phe Ile Gly  
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Ala Ala Ile Leu Ala Val Asn Phe Ser Ser Glu Trp Ser Val Gly Gln  
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Val Ser Thr Asn Thr Ser Tyr Lys Ala Phe Ser Ser Glu Trp Ile Ser  
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Ala Asp Ile Gly Leu Gln Val Gly Leu Gly Gly Val Asn Ile Thr Leu  
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Thr Gly Thr Pro Val Gln Gln Leu Asn Glu Thr Ile Asn Tyr Asn Glu  
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Phe Thr Pro Arg Ser Pro Cys Gly Leu Tyr Arg Gln Tyr Arg Leu Ala  
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Gly His Tyr Thr Ser Ala Met Leu Trp Val Ala Phe Leu Cys Trp Leu  
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Leu Ala Asn Val Met Leu Ser Met Pro Val Leu Val Tyr Gly Gly Tyr  
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1029

Met Leu Leu Ala Thr Gly Ile Phe Gln Leu Leu Ala Leu Leu Phe Phe  
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Ser Met Ala Thr Ser Leu Thr Ser Pro Cys Pro Leu His Leu Gly Ala  
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Thr Gly Leu Leu Cys Val Leu Leu Gly Leu Ala Met Ala Val Ala His  
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Arg Met Gln Pro His Arg Leu Lys Ala Phe Phe Asn Gln Ser Val Asp  
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Glu Asp Pro Met Leu Glu Trp Ser Pro Glu Glu Gly Gly Leu Leu Ser  
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Pro Arg Tyr Arg Ser Met Ala Asp Ser Pro Lys Ser Gln Asp Ile Pro  
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Lys Asp Pro Asp Cys Ala Leu  
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<210> 426

<211> 23

<212> PRT

<213> Homo sapiens

<400> 426

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<213> Homo sapiens

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Val Gly Leu Gly Gly Val Asn Ile Thr Leu Thr Gly Thr Pro Val Gln			
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Gln Leu Asn Glu Thr Ile Asn Tyr Asn Glu Glu Phe Thr Trp Arg Leu			
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Gly Glu Asn Tyr Ala Glu Glu Cys Ala Lys Ala Leu Glu Lys Gly Leu			
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<210> 428

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<212> PRT

<213> Homo sapiens

<400> 428

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His Thr His His Gly Pro
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<213> Homo sapiens

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Leu Ala Ser Ile Ile Met Ile Phe Leu Thr Ala Leu Ala Thr Phe Ile
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<400> 435  
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Pro Lys Asp Pro Asp Cys Ala Leu  
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<210> 437  
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 <212> DNA  
 <213> Mus sp.

<400> 437

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<210> 438

<211> 1410

<212> DNA

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Ser Ser Lys Val Leu Tyr Val Ile Thr Pro Ser Pro Ser His Pro Pro  
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Gln Thr Ala Gln Val Ala Ile Pro Gly His Arg Gln Leu Gly Pro Thr  
370 375 380

Ala Thr Glu Trp Lys Asp Gly Leu Cys Thr Ala Trp Arg Pro Ser Ser  
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Ser Ser Gln Ser Gln Gln Leu Ser Gln Arg Phe Phe Cys Met Ser His  
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Leu Asn Leu Ile Glu Ser Leu His Gln Glu Thr Leu Gly Thr Val Val  
420 425 430

Ser Leu Gly Leu Leu Glu Ile Ser Gly Pro Phe Ser Met Asn Leu Pro  
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Met Thr Ala Ile Pro Ser  
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<211> 760

<212> PRT

<213> Mus sp.

<400> 440

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Thr Gly Gly Gln Gly Pro Met Pro Arg Val Lys Tyr His Ala Gly Asp  
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Gly His Arg Ala Leu Ser Phe Phe Gln Gln Lys Gly Leu Arg Asp Phe  
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Asp Thr Leu Leu Leu Ser Asp Asp Gly Asn Thr Leu Tyr Val Gly Ala  
65 70 75 80

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Leu Pro Pro Arg Glu Lys Ala Pro Leu Ser Arg Asp Gln His Leu Gln  
725 730 735

Pro Ser Lys Asp His Arg Thr Ser Ala Ser Asp Val Asp Ala Asp Asn  
740 745 750

Asn His Leu Gly Ala Glu Val Ala  
755 760

<210> 441

<211> 3046

<212> PRT

<213> Mus sp.

<400> 441

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Ala Gly Gly Gly Gly Thr Cys Thr Gly Thr Ala Cys Thr Gly Cys Thr  
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Gly Gly Gly Gly Ala Ala Cys Cys Ala Thr Cys Thr Gly Gly Thr Gly











Ala Gly Cys Ala Gly Thr Cys Thr Gly Thr Gly Cys Cys Thr Thr Cys		
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Thr Cys Thr Cys Thr Cys Ala Cys Gly Gly Ala Cys Ala Thr Thr Gly		
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Ala Gly Cys Gly Ala Gly Thr Cys Thr Thr Thr Ala Ala Ala Gly Gly		
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Gly Ala Ala Gly Thr Ala Cys Ala Ala Gly Gly Ala Gly Cys Thr Gly		
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Ala Ala Cys Ala Ala Gly Gly Ala Gly Ala Cys Cys Thr Cys Cys Cys		
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Gly Cys Thr Gly Gly Ala Cys Cys Ala Cys Thr Thr Ala Cys Cys Gly		
	1155 1160	1165
Gly Gly Gly Cys Thr Cys Ala Gly Ala Gly Gly Thr Cys Ala Gly Cys		
	1170 1175	1180
Cys Cys Gly Ala Gly Gly Cys Cys Ala Gly Gly Cys Ala Gly Thr Thr		
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Cys Thr Cys Thr Gly Ala Cys Ala Ala Ala Gly Cys Cys Thr Thr Gly		
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Ala Thr Thr Thr Thr Cys Thr Gly Ala Thr Gly Gly Ala Thr Gly Ala		
	1250 1255	1260
Gly Cys Ala Cys Gly Thr Gly Gly Thr Ala Gly Gly Ala Ala Cys Ala		
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Cys Cys Cys Cys Thr Gly Cys Thr Gly Gly Thr Gly Ala Ala Gly Thr		
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Cys Thr Gly Gly Thr Gly Thr Gly Gly Ala Gly Thr Ala Cys Ala Cys		
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Ala Cys Gly Gly Cys Thr Thr Gly Cys Thr Gly Thr Gly Gly Ala Gly		







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Thr Thr Cys Thr Cys Ala Thr Cys Gly Thr Thr Ala Cys Cys Gly Thr 2115 2120 2125		
Cys Cys Thr Cys Cys Thr Gly Gly Cys Cys Ala Thr Cys Gly Thr Gly 2130 2135 2140		
Cys Thr Cys Cys Thr Gly Gly Gly Ala Gly Thr Gly Cys Thr Cys Ala 2145 2150 2155 2160		
Cys Thr Cys Thr Cys Cys Thr Cys Cys Thr Cys Gly Cys Thr Thr Cys 2165 2170 2175		
Cys Cys Cys Ala Cys Thr Gly Gly Gly Gly Gly Cys Gly Cys Thr Gly 2180 2185 2190		
Cys Gly Gly Gly Cys Thr Cys Gly Gly Gly Gly Thr Ala Ala Gly Gly 2195 2200 2205		
Thr Thr Cys Ala Gly Gly Gly Cys Thr Gly Thr Gly Gly Gly Ala Thr 2210 2215 2220		
Gly Cys Thr Gly Cys Cys Cys Cys Cys Cys Ala Gly Gly Gly Ala Ala 2225 2230 2235 2240		
Ala Ala Gly Gly Cys Thr Cys Cys Ala Cys Thr Gly Ala Gly Cys Ala 2245 2250 2255		
Gly Gly Gly Ala Cys Cys Ala Gly Cys Ala Cys Cys Thr Cys Cys Ala 2260 2265 2270		
Gly Cys Cys Cys Thr Cys Cys Ala Ala Gly Gly Ala Cys Cys Ala Cys 2275 2280 2285		
Ala Gly Gly Ala Cys Cys Thr Cys Thr Gly Cys Cys Ala Gly Thr Gly 2290 2295 2300		
Ala Cys Gly Thr Ala Gly Ala Thr Gly Cys Cys Gly Ala Cys Ala Ala 2305 2310 2315 2320		
Cys Ala Ala Cys Cys Ala Thr Cys Thr Gly Gly Gly Cys Gly Cys Cys 2325 2330 2335		
Gly Ala Ala Gly Thr Gly Gly Cys Thr Thr Ala Ala Ala Cys Ala Gly		

2340	2345	2350
Gly Gly Ala Cys Ala Cys Ala Gly Ala Thr Cys Cys Gly Cys Ala Gly		
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Cys Thr Gly Ala Gly Cys Ala Gly Ala Gly Cys Ala Ala Gly Cys Cys		
2370	2375	2380
Ala Cys Thr Gly Gly Cys Cys Thr Thr Gly Thr Thr Gly Gly Cys Thr		
2385	2390	2395 2400
Ala Thr Gly Cys Cys Ala Gly Gly Cys Ala Cys Ala Gly Thr Gly Cys		
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Cys Ala Cys Thr Cys Thr Gly Ala Cys Cys Ala Gly Gly Gly Thr Ala		
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Gly Gly Ala Gly Gly Cys Thr Cys Thr Cys Cys Thr Gly Cys Thr Ala		
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Ala Cys Gly Thr Gly Thr Gly Thr Cys Ala Cys Cys Thr Ala Cys Ala		
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Gly Cys Ala Cys Cys Cys Ala Gly Thr Ala Gly Gly Thr Cys Cys Thr		
2465	2470	2475 2480
Cys Cys Cys Cys Thr Gly Thr Gly Gly Gly Ala Cys Thr Cys Thr Cys		
2485	2490	2495
Thr Thr Cys Thr Gly Cys Ala Ala Gly Cys Ala Cys Ala Thr Thr Gly		
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Gly Gly Cys Thr Gly Thr Cys Thr Cys Cys Ala Thr Ala Cys Cys Thr		
2515	2520	2525
Gly Thr Ala Cys Thr Thr Gly Thr Gly Cys Thr Gly Thr Gly Ala Cys		
2530	2535	2540
Ala Gly Gly Ala Ala Gly Ala Gly Cys Cys Ala Gly Ala Cys Ala Gly		
2545	2550	2555 2560
Gly Thr Thr Thr Cys Thr Thr Thr Gly Ala Thr Thr Thr Thr Gly Ala		
2565	2570	2575
Thr Thr Gly Ala Cys Cys Cys Ala Ala Gly Ala Gly Cys Cys Cys Thr		
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Gly Cys Cys Thr Gly Thr Ala Ala Cys Ala Ala Ala Cys Gly Thr Gly		

Cys Thr Cys Cys Ala Gly Gly Ala Gly Ala Cys Cys Ala Thr Gly Ala		
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Ala Ala Gly Gly Thr Gly Thr Gly Gly Cys Thr Gly Thr Cys Thr Gly		
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Gly Gly Ala Thr Thr Cys Thr Gly Thr Gly Gly Thr Gly Ala Cys Ala		
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Ala Ala Cys Cys Thr Ala Ala Gly Cys Ala Thr Cys Cys Gly Ala Gly		
	2660	2665 2670
Cys Ala Ala Gly Cys Thr Gly Gly Gly Gly Cys Thr Ala Thr Thr Cys		
2675	2680	2685
Cys Thr Gly Cys Ala Ala Ala Cys Thr Cys Cys Ala Thr Cys Cys Thr		
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Gly Ala Ala Cys Gly Cys Thr Gly Thr Cys Ala Cys Thr Cys Thr Ala		
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Gly Ala Ala Gly Cys Ala Gly Cys Thr Gly Cys Thr Gly Cys Thr Thr		
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Thr Gly Ala Ala Cys Ala Cys Cys Ala Gly Cys Cys Cys Ala Cys Cys		
	2740	2745 2750
Cys Thr Cys Cys Thr Thr Cys Cys Cys Ala Ala Gly Ala Gly Thr Cys		
2755	2760	2765
Thr Cys Thr Ala Thr Gly Gly Ala Gly Thr Thr Gly Gly Cys Cys Cys		
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Cys Thr Thr Gly Thr Gly Thr Thr Thr Cys Cys Thr Thr Thr Ala Cys		
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Cys Ala Gly Thr Cys Gly Gly Gly Cys Cys Ala Thr Ala Cys Thr Gly		
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Thr Thr Thr Gly Gly Gly Ala Ala Gly Thr Cys Ala Thr Cys Thr Cys		
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Thr Gly Ala Ala Gly Thr Cys Thr Ala Ala Cys Cys Ala Cys Cys Thr		
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Thr Cys Cys Thr Thr Cys Thr Thr Gly Gly Thr Thr Cys Ala Gly Thr		



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Thr Thr Gly Gly Ala Cys Ala Gly Ala Thr Thr Gly Thr Thr Ala Thr		
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Thr Thr Ala Ala Ala Gly		
3045		

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<210> 443  
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Lys Thr Phe Tyr Ala Leu Ala Pro Val Ala Thr Val Lys Tyr Thr Lys  
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Ser Leu Ile Asn Lys Leu Arg Phe Val Pro Gln Ser Leu Phe Lys Phe  
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Ile Phe Gly Asp Lys Ile Phe Tyr Pro His Asn Phe Phe Asp Gln Phe  
225 230 235 240

Leu Ala Thr Glu Val Cys Ser Arg Glu Met Leu Asn Leu Leu Cys Ser  
245 250 255

Asn Ala Leu Phe Ile Ile Cys Gly Phe Asp Ser Lys Asn Phe Asn Thr  
260 265 270

Ser Arg Leu Asp Val Tyr Leu Ser His Asn Pro Ala Gly Thr Ser Val  
275 280 285

Gln Asn Met Phe His Trp Thr Gln Ala Val Lys Ser Gly Lys Phe Gln  
290 295 300

Ala Tyr Asp Trp Gly Ser Pro Val Gln Asn Arg Met His Tyr Asp Gln  
305 310 315 320

Ser Gln Pro Pro Tyr Tyr Asn Val Thr Ala Met Asn Val Pro Ile Ala  
325 330 335

Val Trp Asn Gly Gly Lys Asp Leu Leu Ala Asp Pro Gln Asp Val Gly  
340 345 350

Leu Leu Leu Pro Lys Leu Pro Asn Leu Ile Tyr His Lys Glu Ile Pro  
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Phe Tyr Asn His Leu Asp Phe Ile Trp Ala Met Asp Ala Pro Gln Glu  
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Val Tyr Asn Asp Ile Val Ser Met Ile Ser Glu Asp Lys Lys  
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<210> 446

<211> 760

<212> PRT

<213> Mus sp.

<400> 446

Met Ala Leu Pro Ser Leu Gly Gln Asp Ser Trp Ser Leu Leu Arg Val  
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Thr	Gly	Gly	Gln	Gly	Pro	Met	Pro	Arg	Val	Lys	Tyr	His	Ala	Gly	Asp			
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Gly	His	Arg	Ala	Leu	Ser	Phe	Phe	Gln	Gln	Lys	Gly	Leu	Arg	Asp	Phe			
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Asp	Thr	Leu	Leu	Leu	Ser	Asp	Asp	Gly	Asn	Thr	Leu	Tyr	Val	Gly	Ala			
	65				70					75					80			
Arg	Glu	Thr	Val	Leu	Ala	Leu	Asn	Ile	Gln	Asn	Pro	Gly	Ile	Pro	Arg			
			85					90						95				
Leu	Lys	Asn	Met	Ile	Pro	Trp	Pro	Ala	Ser	Glu	Arg	Lys	Lys	Thr	Glu			
			100					105						110				
Cys	Ala	Phe	Lys	Lys	Lys	Ser	Asn	Glu	Thr	Gln	Cys	Phe	Asn	Phe	Ile			
		115					120					125						
Arg	Val	Leu	Val	Ser	Tyr	Asn	Ala	Thr	His	Leu	Tyr	Ala	Cys	Gly	Thr			
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Phe	Ala	Phe	Ser	Pro	Ala	Cys	Thr	Phe	Ile	Glu	Leu	Gln	Asp	Ser	Leu			
	145				150					155					160			
Leu	Leu	Pro	Ile	Leu	Ile	Asp	Lys	Val	Met	Asp	Gly	Lys	Gly	Gln	Ser			
			165					170						175				
Pro	Leu	Thr	Leu	Phe	Thr	Ser	Thr	Gln	Ala	Val	Leu	Val	Asp	Gly	Met			
			180					185					190					
Leu	Tyr	Ser	Gly	Thr	Met	Asn	Asn	Phe	Leu	Gly	Ser	Glu	Pro	Ile	Leu			
		195				200						205						
Met	Arg	Thr	Leu	Gly	Ser	His	Pro	Val	Leu	Lys	Thr	Asp	Ile	Phe	Leu			
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Arg	Trp	Leu	His	Ala	Asp	Ala	Ser	Phe	Val	Ala	Ala	Ile	Pro	Ser	Thr			
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Gln	Val	Val	Tyr	Phe	Phe	Phe	Glu	Glu	Thr	Ala	Ser	Glu	Phe	Asp	Phe			
			245					250						255				
Phe	Glu	Glu	Leu	Tyr	Ile	Ser	Arg	Val	Ala	Gln	Val	Cys	Lys	Asn	Asp			
		260						265					270					



Ser Thr Lys Pro Trp Lys Gln Asp Met Glu Arg Gly Asn Pro Glu Trp  
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Val Cys Thr Arg Gly Pro Met Ala Arg Ser Pro Arg Arg Gln Ser Pro  
545 550 555 560

Pro Gln Leu Ile Lys Glu Val Leu Thr Val Pro Asn Ser Ile Leu Glu  
565 570 575

Leu Arg Cys Pro His Leu Ser Ala Leu Ala Ser Tyr His Trp Ser His  
580 585 590

Gly Arg Ala Lys Ile Ser Glu Ala Ser Ala Thr Val Tyr Asn Gly Ser  
595 600 605

Leu Leu Leu Leu Pro Gln Asp Gly Val Gly Gly Leu Tyr Gln Cys Val  
610 615 620

Ala Thr Glu Asn Gly Tyr Ser Tyr Pro Val Val Ser Tyr Trp Val Asp  
625 630 635 640

Ser Gln Asp Gln Pro Leu Ala Leu Asp Pro Glu Leu Ala Gly Val Pro  
645 650 655

Arg Glu Arg Val Gln Val Pro Leu Thr Arg Val Gly Gly Gly Ala Ser  
660 665 670

Met Ala Ala Gln Arg Ser Tyr Trp Pro His Phe Leu Ile Val Thr Val  
675 680 685

Leu Leu Ala Ile Val Leu Leu Gly Val Leu Thr Leu Leu Leu Ala Ser  
690 695 700

Pro Leu Gly Ala Leu Arg Ala Arg Gly Lys Val Gln Gly Cys Gly Met  
705 710 715 720

Leu Pro Pro Arg Glu Lys Ala Pro Leu Ser Arg Asp Gln His Leu Gln  
725 730 735

Pro Ser Lys Asp His Arg Thr Ser Ala Ser Asp Val Asp Ala Asp Asn  
740 745 750

Asn His Leu Gly Ala Glu Val Ala  
755 760

<210> 447

<211> 3046  
 <212> DNA  
 <213> Mus sp.

<400> 447

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<210> 448

<211> 1436

<212> PRT

<213> Bovine

<400> 448

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      20                      25                     30

Gly Val His Arg Cys Glu Gly Arg Val Glu Val Lys His Gln Gly Glu
      35                      40                     45

Trp Gly Thr Val Asp Gly Tyr Arg Trp Thr Leu Lys Asp Ala Ser Val
      50                      55                     60

Val Cys Arg Gln Leu Gly Cys Gly Ala Ala Ile Gly Phe Pro Gly Gly
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Ala Tyr Phe Gly Pro Gly Leu Gly Pro Ile Trp Leu Leu Tyr Thr Ser
      85                      90                     95

Cys Glu Gly Thr Glu Ser Thr Val Ser Asp Cys Glu His Ser Asn Ile
      100                     105                     110

Lys Asp Tyr Arg Asn Asp Gly Tyr Asn His Gly Arg Asp Ala Gly Val
      115                     120                     125

Val Cys Ser Gly Phe Val Arg Leu Ala Gly Gly Asp Gly Pro Cys Ser
      130                     135                     140

Gly Arg Val Glu Val His Ser Gly Glu Ala Trp Ile Pro Val Ser Asp
      145                     150                     155                     160

Gly Asn Phe Thr Leu Ala Thr Ala Gln Ile Ile Cys Ala Glu Leu Gly
      165                     170                     175

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Cys Gly Lys Ala Val Ser Val Leu Gly His Glu Leu Phe Arg Glu Ser  
 180 185 190  
 Ser Ala Gln Val Trp Ala Glu Glu Phe Arg Cys Glu Gly Glu Glu Pro  
 195 200 205  
 Glu Leu Trp Val Cys Pro Arg Val Pro Cys Pro Gly Gly Thr Cys His  
 210 215 220  
 His Ser Gly Ser Ala Gln Val Val Cys Ser Ala Tyr Ser Glu Val Arg  
 225 230 235 240  
 Leu Met Thr Asn Gly Ser Ser Gln Cys Glu Gly Gln Val Glu Met Asn  
 245 250 255  
 Ile Ser Gly Gln Trp Arg Ala Leu Cys Ala Ser His Trp Ser Leu Ala  
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 Thr Pro Gly Gly Pro His Leu Val Glu Glu Gly Asp Gln Ile Leu Thr  
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 Ala Arg Phe His Cys Ser Gly Ala Glu Ser Phe Leu Trp Ser Cys Pro  
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 Val Thr Ala Leu Gly Gly Pro Asp Cys Ser His Gly Asn Thr Ala Ser  
 325 330 335  
 Val Ile Cys Ser Gly Asn Gln Ile Gln Val Leu Pro Gln Cys Asn Asp  
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 Ser Val Ser Gln Pro Thr Gly Ser Ala Ala Ser Glu Asp Ser Ala Pro  
 355 360 365  
 Tyr Cys Ser Asp Ser Arg Gln Leu Arg Leu Val Asp Gly Gly Gly Pro  
 370 375 380  
 Cys Ala Gly Arg Val Glu Ile Leu Asp Gln Gly Ser Trp Gly Thr Ile  
 385 390 395 400  
 Cys Asp Asp Gly Trp Asp Leu Asp Asp Ala Arg Val Val Cys Arg Gln  
 405 410 415  
 Leu Gly Cys Gly Glu Ala Leu Asn Ala Thr Gly Ser Ala His Phe Gly  
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Ala Leu Glu Ala Val Arg Ser Ala Ala Phe Gly Pro Gly Asn Gly Ser  
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Ile Trp Leu Asp Glu Val Gln Cys Gly Gly Arg Glu Ser Ser Leu Trp  
 1220 1225 1230

Asp Cys Val Ala Glu Pro Trp Gly Gln Ser Asp Cys Lys His Glu Glu  
 1235 1240 1245

Asp Ala Gly Val Arg Cys Ser Gly Val Arg Thr Thr Leu Pro Thr Thr  
 1250 1255 1260

Thr Ala Gly Thr Arg Thr Thr Ser Asn Ser Leu Pro Gly Ile Phe Ser  
 1265 1270 1275 1280

Leu Pro Gly Val Leu Cys Leu Ile Leu Gly Ser Leu Leu Phe Leu Val  
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Leu Val Ile Leu Val Thr Gln Leu Leu Arg Trp Arg Ala Glu Arg Arg  
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Ala Leu Ser Ser Tyr Glu Asp Ala Leu Ala Glu Ala Val Tyr Glu Glu  
 1315 1320 1325

Leu Asp Tyr Leu Leu Thr Gln Lys Glu Gly Leu Gly Ser Pro Asp Gln  
 1330 1335 1340

Met Thr Asp Val Pro Asp Glu Asn Tyr Asp Asp Ala Glu Glu Val Pro  
 1345 1350 1355 1360

Val Pro Gly Thr Pro Ser Pro Ser Gln Gly Asn Glu Glu Glu Val Pro  
 1365 1370 1375

Pro Glu Lys Glu Asp Gly Val Arg Ser Ser Gln Thr Gly Ser Phe Leu  
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Asn Phe Ser Arg Glu Ala Ala Asn Pro Gly Glu Gly Glu Glu Ser Phe  
 1395 1400 1405

Trp Leu Leu Gln Gly Lys Lys Gly Asp Ala Gly Tyr Asp Asp Val Glu  
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Leu Ser Ala Leu Gly Thr Ser Pro Val Thr Phe Ser  
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cctgggggaa gagaaagag cttctggctg ctccagggga agaaagggga tgctgggtat 4260
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<210> 450

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Domain  
Consensus Sequence

<220>

<223> Residue 1 is L or I or V

<220>

<223> Residue 2 is any amino acid residue

<220>

<223> Residue 3 is L or I or V

<220>

<223> One or both of residues 4 and 5 can be present;  
when present, each of residues 4 and 5 is any  
amino acid residue

<220>

<223> Residue 7 is any amino acid residue

<220>

<223> Residue 10 is N or H

<220>

<223> Residue 11 is any amino acid residue

<400> 450

Xaa Xaa Xaa Xaa Xaa Asp Xaa Asn Asp Xaa Xaa Pro  
1 5 10

<210> 451

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Domain  
Consensus Sequence

<220>

<223> Residue 1 is L, I, A, or T

<220>

<223> Each of residues is any amino acid residue

<220>

<223> One or both of residues 6 and 7 can be present;  
when present, each of residues 6 and 7 is any  
amino acid residue

<220>

<223> Residue 8 is P or E

<220>

<223> Each of residues 9 and 10 is any amino acid  
residue

<220>



<223> Residue 11 is L, I, V, M, F, or Y

<220>

<223> Residue 12 is D, E, N, Q, or S

<220>

<223> Residue 13 is S, T, or A

<220>

<223> Residue 14 is A or V

<220>

<223> Residue 15 is L, I, V, M, F, or Y

<400> 451

Xaa	Xaa	Xaa	Xaa	Trp	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
1				5				10						15	

<210> 452

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Domain  
Consensus Sequence

<220>

<223> Residue 1 is G, S, T, A, L, I, V, or N

<220>

<223> Each of residues 2 and 3 is any amino acid residue

<220>

<223> Residue 6 is L, I, V, M, F, Y, or W

<220>

<223> Residue 7 is D, E, G, H, R, K, or P

<220>

<223> Residue 9 is any amino acid residue

<220>

<223> Residue 10 is L, I, V, M, F, Y, W, G, S, P, or Q

<400> 452

Xaa Xaa Xaa His Glu Xaa Xaa His Xaa Xaa



<220>

<223> Residue 38 is F, Y, or W

<400> 454

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Glu Xaa Xaa Xaa  
1 5 10 15

Glu Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
20 25 30

Xaa Xaa Xaa Xaa Xaa Xaa  
35

<210> 455

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Domain  
Consensus Sequence

<220>

<223> Residue 1 is F or Y

<220>

<223> Residue 6 is D, N, or R

<400> 455

Xaa Cys Arg Asn Pro Xaa  
1 5

<210> 456

<211> 38

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Domain  
Consensus Sequence

<220>

<223> Each of residues 2-6, 8, 9, 11-16, 22-24, 26-33,  
and 35-37 is any amino acid residue

<220>

<223> Residue 25 is F, Y, or W

<400> 456

Gly Xaa Xaa Xaa Xaa Xaa Gly Xaa Xaa Glu Xaa Xaa Xaa Xaa Xaa Xaa  
1 5 10 15

Trp Gly Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
20 25 30

Xaa Cys Xaa Xaa Xaa Gly  
35

<210> 457

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Domain  
Consensus Sequence

<220>

<223> Each of residues 1-3, 5, 8-11, and 15-22 is any  
amino acid residue

<220>

<223> Residue 6 can be absent; when present, it is any  
amino acid residue

<220>

<223> Residue 13 can be absent; when present, it is any  
amino acid residue

<220>

<223> Residue 7 is E or Q

<220>

<223> Residue 12 is L, I, V, or M

<220>

<223> Residue 14 is E, Q, or K

<400> 457

Xaa Xaa Xaa Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
1 5 10 15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Pro

<210> 458  
 <211> 22  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Leucine Zipper  
 Region of TANGO 366

<400> 458

Leu Asp Leu Ser Gly Thr Asn Leu Val Pro Leu Pro Glu Ala Leu Leu  
 1 5 10 15

Leu His Leu Pro Ala Leu  
 20

<210> 459  
 <211> 22  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Leucine Zipper  
 Region of INTERCEPT 217

<400> 459

Leu Ser Cys Thr Gly Leu Gly Leu Gln Asp Val Pro Ala Glu Leu Pro  
 1 5 10 15

Ala Ala Thr Ala Asp Leu  
 20

<210> 460  
 <211> 22  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Leucine Zipper  
 Region of TANGO 331

<400> 460

Leu Glu Ala Gln Glu Glu His Leu Glu Ala Trp Trp Leu Gln Leu Lys

1

5

10

15

Ser Glu Tyr Pro Asp Leu  
20

FOI b7D OCT 6 5 26 00